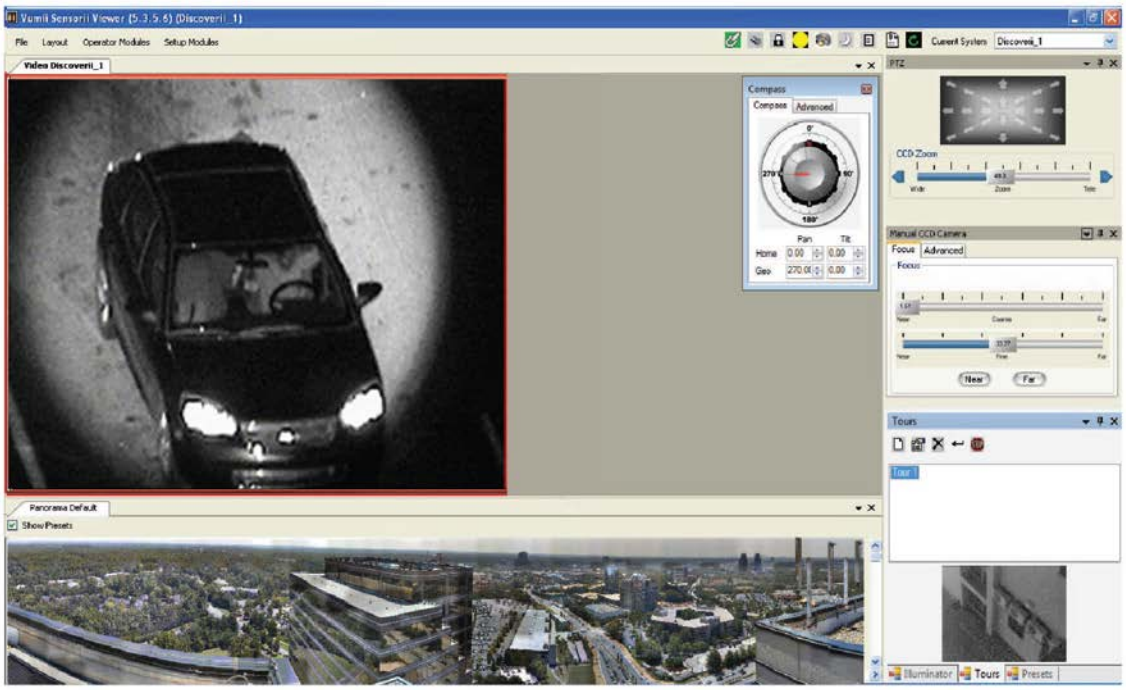
Sensorii™

Control Application for Vumii Camera Systems



Ver. 4.0
Installation and Operation Manual

Document P/N PST900019110A Rev J

Feb. 2014

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Revision History

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A	Initial Release	I.C.	15/03/2011
B	CompactSec IP interface	R.So.	15/08/2011
C	CompactSec IP update Opgal IP	R.So.	1/09/2011
D	Fire Detection feature	R.Si.	15/10/2011
E	Updates of OCA3	R.Si.	15/02/2012
F	EyeSec IP additions	RSi.	25/06/2012
G	Sensorii Ver. 4	D.U.	12/02/2013
H	Q1 2013 update session	D.U.	29/04/2013
I	Q3 2013 update session	D.U.	29/07/2013
J	Added LRF option	D.U.	23/02/2014

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Preface

Special Terms

This manual uses the following conventions:

- Menu selection: To select the Exit command from the Main Menu, you are instructed, "Select **Application➔Exit**".
- Buttons: Buttons on the screen are marked **Button.**
- Field Entry: Text boxes and fields are marked **Text Box**.
- Instructions: Numbered lists represent sequential instructions.
- Bulleted lists: Bulleted lists are used for information or instructions that do not involve sequential steps.
- Special terms: Special terms such as window names or list selections are in bold.
- Hyperlinks: Section of text marked in blue function as a link to the relevant locations in the document (e.g. see Section 1.2: System Overview).
- Additional Details: The following term is used to refer to other locations in this document where more data is available (🗁 Section 1.2: System Overview).
- Notes and Tips

NOTE

This type of message includes essential information.

TIP

This type of message includes alternative information that could help you enhance your operation.

Safety

Sensorii has been designed to meet common safety standards.

Under normal operation, Sensorii system presents no hazards to its operator, administrator or other personnel. Read the safety section of the camera model user manual (🗁 Applicable Documents) for specific safety information.

Applicable Documents

- Accuracii™ installation and operation manual (P/N- UMACSEC-0A)
- Sii™ AT/MLX installation and operation manual (P/N-UM-SIIATMLX-0A)
- Sii™ XR cooled installation and operation manual (P/N- UM-SIIXR-0A)
- Sii™ XR Uncooled installation and operation manual (P/N- UM-SIIXRUC-0A)
- OFC Installation Quick Guide (P/N UM-SIIOFC-0A)
- Claritii 600™ User Manual (P/N- UMC600A0000A)
- Discoverii™ 3000 User Manual (P/N PSD3000A01)

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1. Introduction

This chapter provides basic information about Sensorii and includes the following sections:

- Section 1.1: Assumptions and Prerequisites
- Section 1.2: System Overview
- Section 1.3: Communication Types
- Section 1.4: Terminology

1.1 Assumptions and Prerequisites

This manual assumes that:

- The operator and administrator of Sensorii program have basic computer knowledge and the necessary experience operating personal computers.
- The control computer on which Sensorii is to be installed is equipped with Windows XP service pack 2 or higher operating system.

NOTE

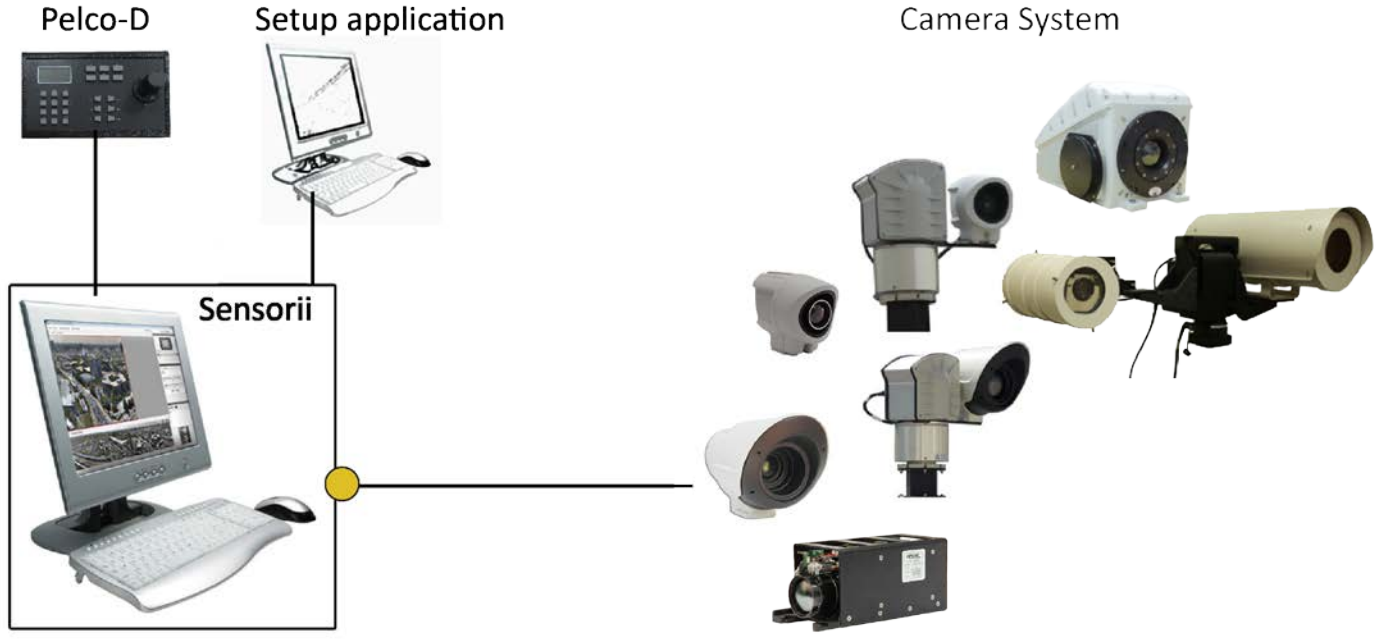
Vumii has updated its model group names. When defining a new camera system using the task manger (🗁Section 3.4.2: Adding a New Camera), use the Appendix B: Model Group Conversion Table on page 144 to select the proper model group according to your camera name:

1.2 System Overview

Sensorii is the software application that controls one or more observation and surveillance systems (see Figure 1-1).

The operator controls the camera from the graphical user interface (GUI). A control keyboard (e.g. Pelco-D) can be connected and operated simultaneously. Sensorii enables other setup applications (e.g. Vumii Camera Control application) to communicate with a device that is connected to Sensorii.

Figure 1-1: Sensorii System Overview



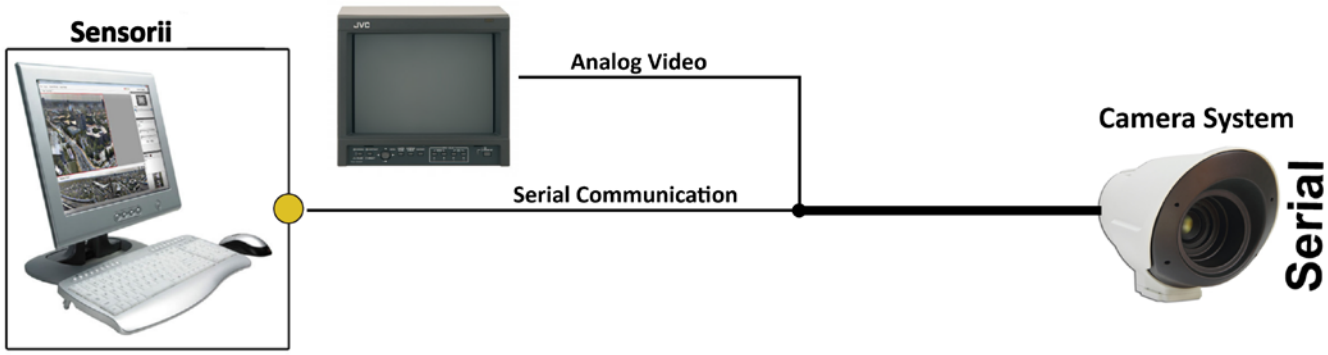
1.3 Communication Types

Camera systems connected to Sensorii can be divided to the following groups:

1.3.1 System using Serial Communication

Sensorii communicates with this camera system using one of the following serial communication protocols: RS-232, RS-422, or RS-485.

Figure 1-2: Camera with Serial Communication



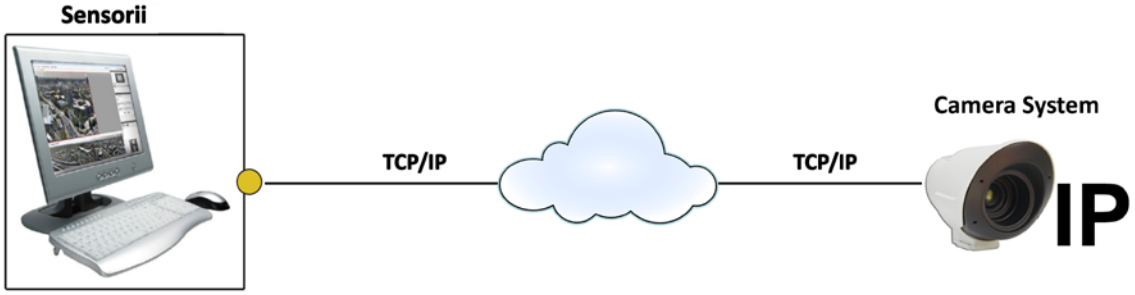
This type of communication is relevant to the following models:

- *Sii AT Serial*
- *Sii ML Serial*
- *Sii XR Serial*
- *Sii MLX*
- *Sii AT PTZ*
- *Sii ML PTZ*
- *Discoverii*
- *Claritii*
- *Accuracii AT*
- *Accuracii ML*
- *Accuracii XR*
- *OFC*

1.3.2 System using IP Communication

This camera system uses an embedded IP communication video encoder to communicate with Sensorii.

Figure 1-3: Communicating with IP Camera



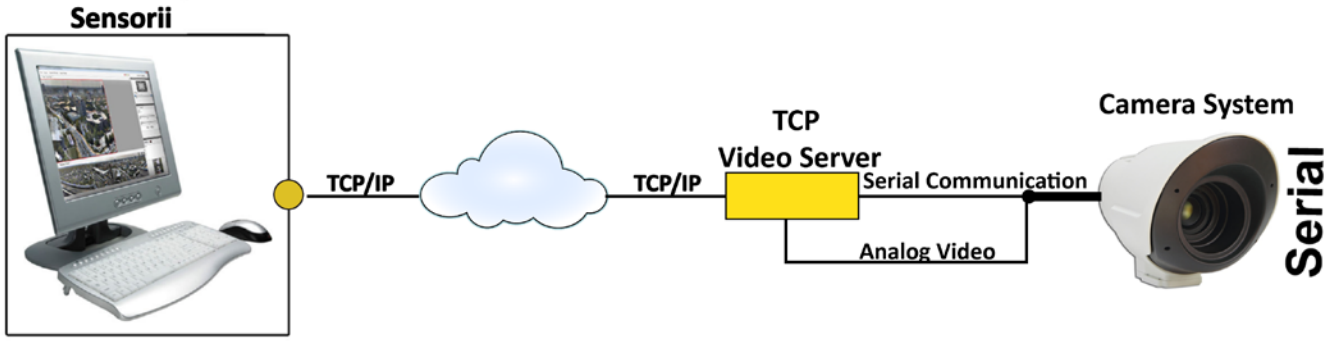
This type of communication is relevant to the following models:

- Sii AT IP
- Sii ML IP
- Sii XR cooled IP models
- Discoverii

1.3.3 System using an External TCP Video Server

This camera system with serial communication uses an external TCP video server (such as Axis) to communicate with Sensorii.

Figure 1-4: Communicating with IP Camera



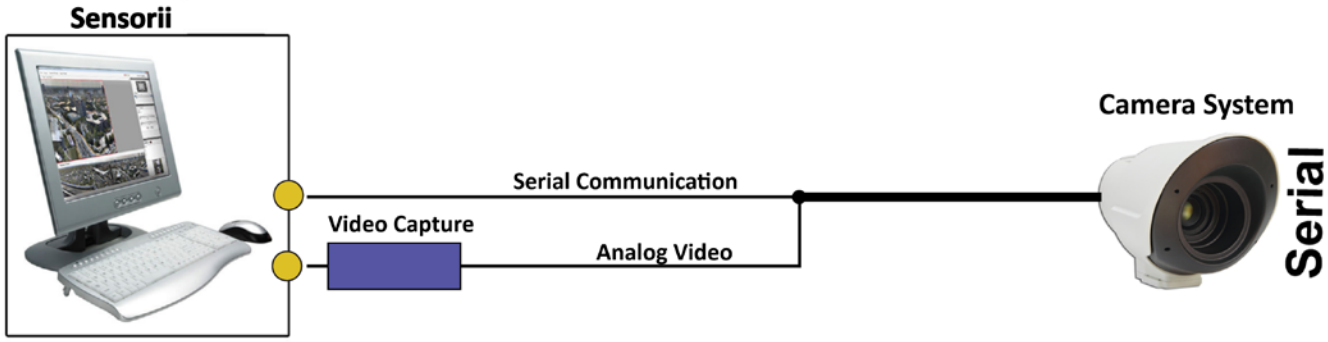
This type of communication is relevant to the following models:

- *Sii AT Serial*
- *Sii ML Serial*
- *Sii XR Serial*
- *Sii MLX*
- *Sii AT PTZ*
- *Sii ML PTZ*
- *Discoverii*
- *Claritii*
- *Accuracii AT*
- *Accuracii ML*
- *Accuracii XR*
- *OFC*

1.3.4 Analog Video Capturing

A System using Serial Communication can use a video capturing device to display the analog video on the Sensorii screen. The capturing device must comply with DirectShow standards (🗁Section 1.3.1).

Figure 1-5: Camera with Serial Communication and Video Capture Device



This type of communication is relevant to the following models:

- *Sii AT Serial*
- *Sii ML Serial*
- *Sii XR Serial*
- *Sii MLX*
- *Sii AT PTZ*
- *Sii ML PTZ*
- *Discoverii*
- *Claritii*
- *Accuracii AT*
- *Accuracii ML*
- *Accuracii XR*
- *OFC*

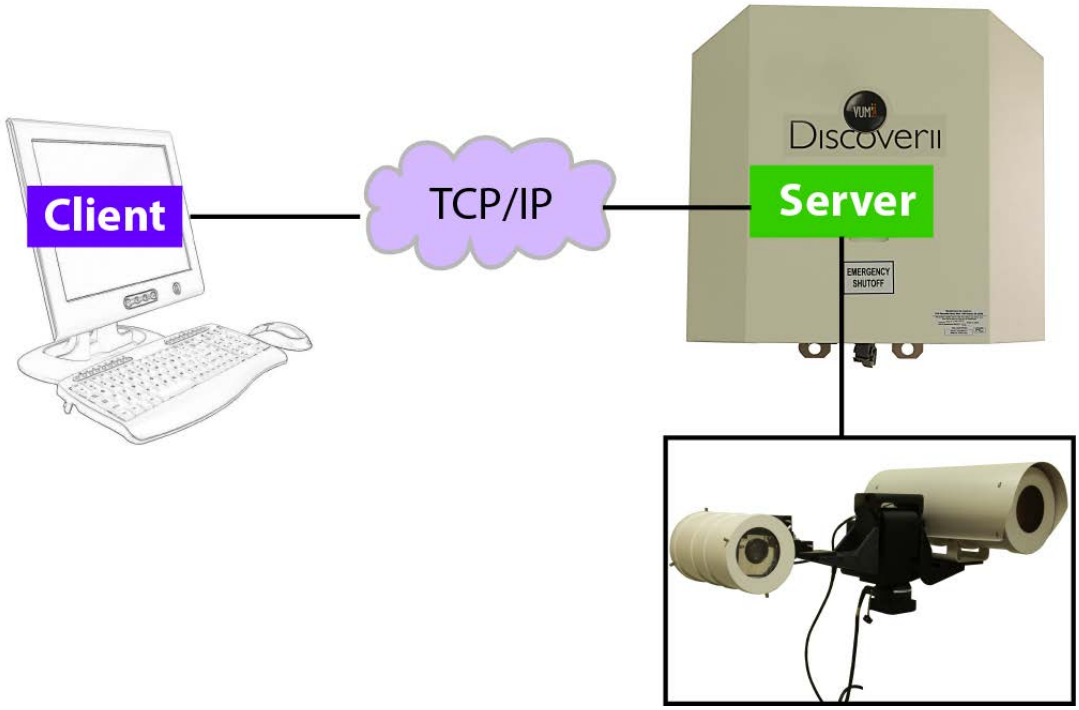
1.3.5 Client Server

1.3.5.1 Embedded Computer

Discoverii™ 3000 includes a computer board that is embedded in the Electronic Unit (EU). The embedded computer functions as communication server between the camera and the control computer. Sensorii application is separated into two installations:

- Client application– installed on the computer used for monitoring and control of Discoverii™ 3000.
- Server application installed on the embedded computer and contains the application modules associated with the Camera Manager.

Figure 1-6: Client Server Overview



This type of communication is relevant to the following models:

- *Sii AT Serial*
- *Sii ML Serial*
- *Sii XR Serial*
- *Sii MLX*
- *Sii AT PTZ*
- *Sii ML PTZ*
- *Discoverii*
- *Claritii*
- *Accuracii AT*
- *Accuracii ML*
- *Accuracii XR*
- *OFC*

1.4 Terminology

This manual uses the following terminology:

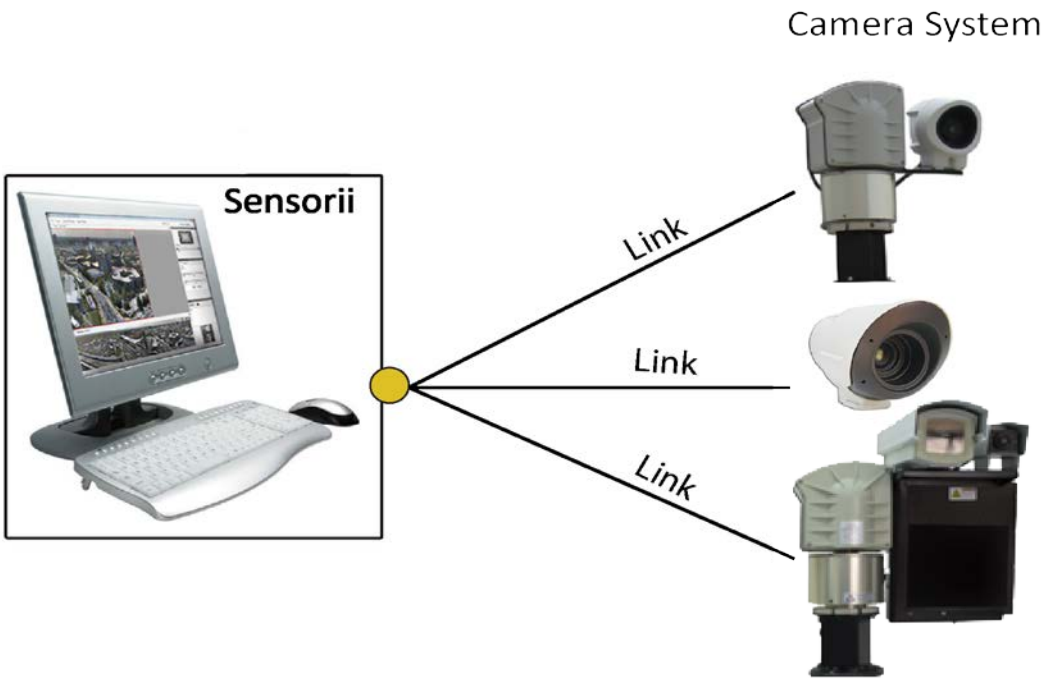
1.4.1 Camera System

Sensorii can be connected to one or multiple camera systems. of the same or differing types.

Each camera system is defined as a link on Sensorii. The camera system link includes all the parameters required for Sensorii to communicate and control the camera system.

Sensorii controls a single camera system at a time. The controlled camera is selected by the operator.

Figure 1-7: Camera System



1.4.2 Add-on

An Add-on is an additional imager installed on the same Camera System. An example of an Add-on is the secondary camera located on the Accuracii ML™ Camera System.

1.4.3 Preset

Preset is a location or an object that the operator frequently views for surveillance purposes or as a reference point to aid in calibrating the system. Sensorii saves the preset location by recording the position of the camera unit (pan and tilt), fire detection parameters, and the optical parameters (focus, zoom, intensity and gain).

1.4.4 Tour

Tour is a scan program consisting of a series of presets. Sensorii moves the Camera System from preset to preset, stops the camera movement for a predefined delay time before continuing to the next preset.

2. User Interface

This section describes Sensorii GUI and includes the following sections:

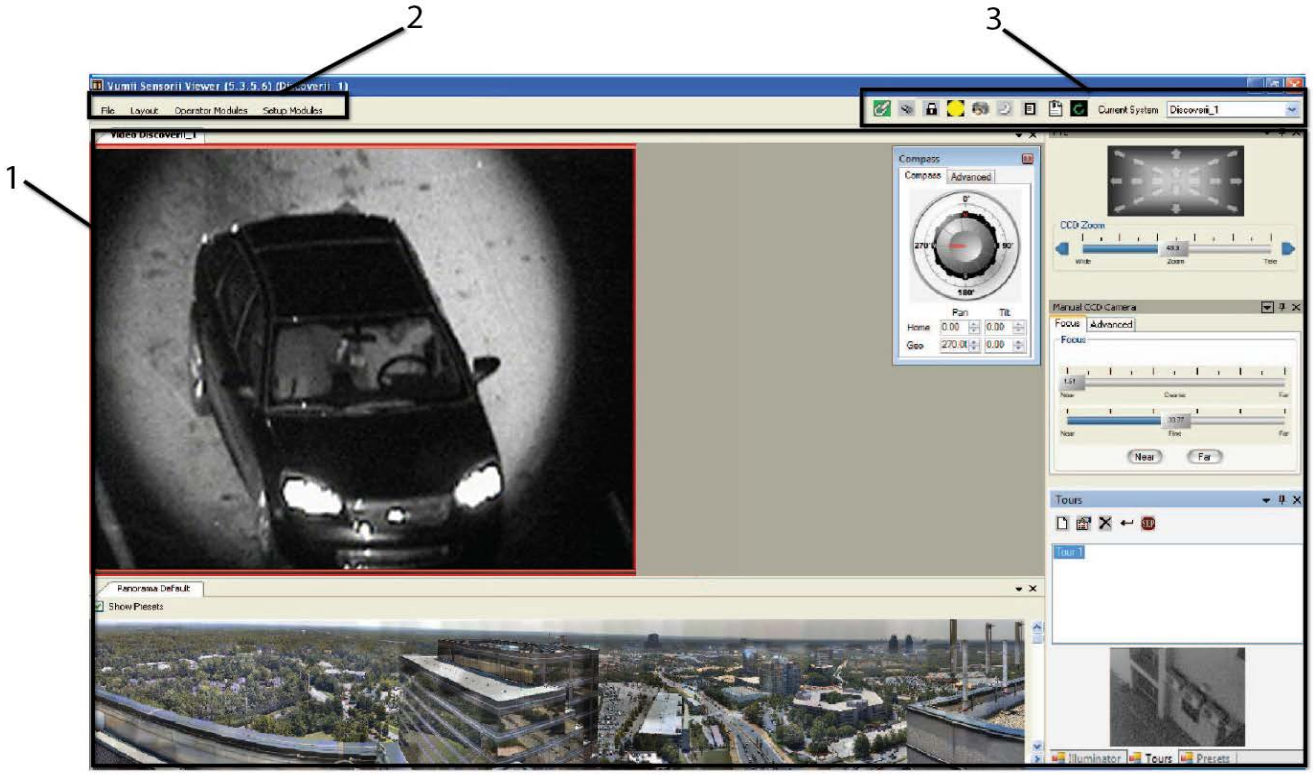
- Section 2.1: Overview
- Section 2.2: Main Menu
- Section 2.3: Upper Toolbar
- Section 2.4: Workspace
- Section 2.5: Scroll Bar Adjustment
- Section 2.6: Availability of Sensorii Functions

2.1 Overview

The Sensorii user interface consists of the following major components:

- **Main Menu** (2) – includes options for designing the workspace layout, operating and configuring the camera systems (🗁Section 2.2).
- **Upper Toolbar** (3) – includes tool icons relevant to the active camera system and the **Current System** option box (🗁Section 2.3).
- **Workspace** (1) – the main camera operation area which includes a customizable layout of operation windows (🗁Section 2.4).

Figure 2-1: User Interface Overview

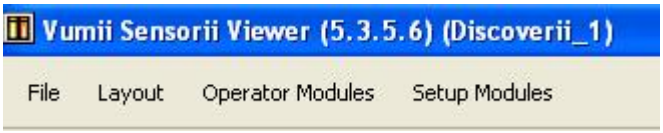


2.2 Main Menu

The main menu includes all Sensorii functions divided into the following sub-menus (see Figure 2-2):

- **File** – enables exiting the application.
- **Layout** – enables managing the workspace layout.
- **Operator Modules** – enables opening windows to operate the Camera System.
- **Setup Modules** – enables setup tasks performed by the system administrator.

Figure 2-2: Main Menu



2.3 Upper Toolbar

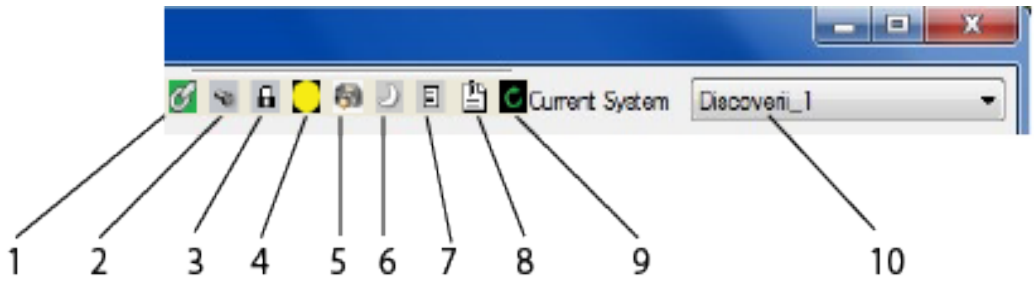
NOTE

Each Camera System has different features. The toolbar changes according to the active system. The toolbar in Figure 2-3 is from one particular system and is used for demonstration purposes only.

The Upper Toolbar includes the following (see Figure 2-3):

- **Camera Link Indicator (1)** – appears green when there is an active link with the selected camera, appears red when there is no active link.
- **Illuminator Button (2)** – activates and deactivates the laser.
- **Slave (3)** –the laser zoom is connected to and controlled by the imager zoom control - click here to control the laser zoom independent of the imager zoom.
- **Beam Size (4)** – switches illuminator laser beam between three predefined sizes- enabled in night mode only.
- **Snapshots (5)** – takes a snapshot of the video screen. Use the **CTRL** key for automatic image file names. Use the **SHIFT** key to take a 100 snapshot sequence. Links to the snapshots are available in the log file.
- **Day/Night Setting (6)** – switches Camera System between day and night mode; operates the active illumination (e.g. LED panel when using the Claritii 500).
- **Display Application Messages (7)** – displays a file of alerts which were recorded in the communication log; the icon flashes red when there is a current alert.
- **Camera Service Monitor (8)** – opens an active communication log with the records of transmission between Sensorii and the Camera Systems.
- **Refresh (9)** – resets the screen display.
- **Current System Selection (10)** – selects the active controlled camera from the camera systems registered in the Camera Manager.

Figure 2-3: Upper Toolbar



2.4 Workspace

The workspace is a customizable layout of operation windows which are available for the active camera system. Operation windows can be displayed as a floating window or they can be docked and become a part of the layout (🗁Section 4.4: Layout Setup).

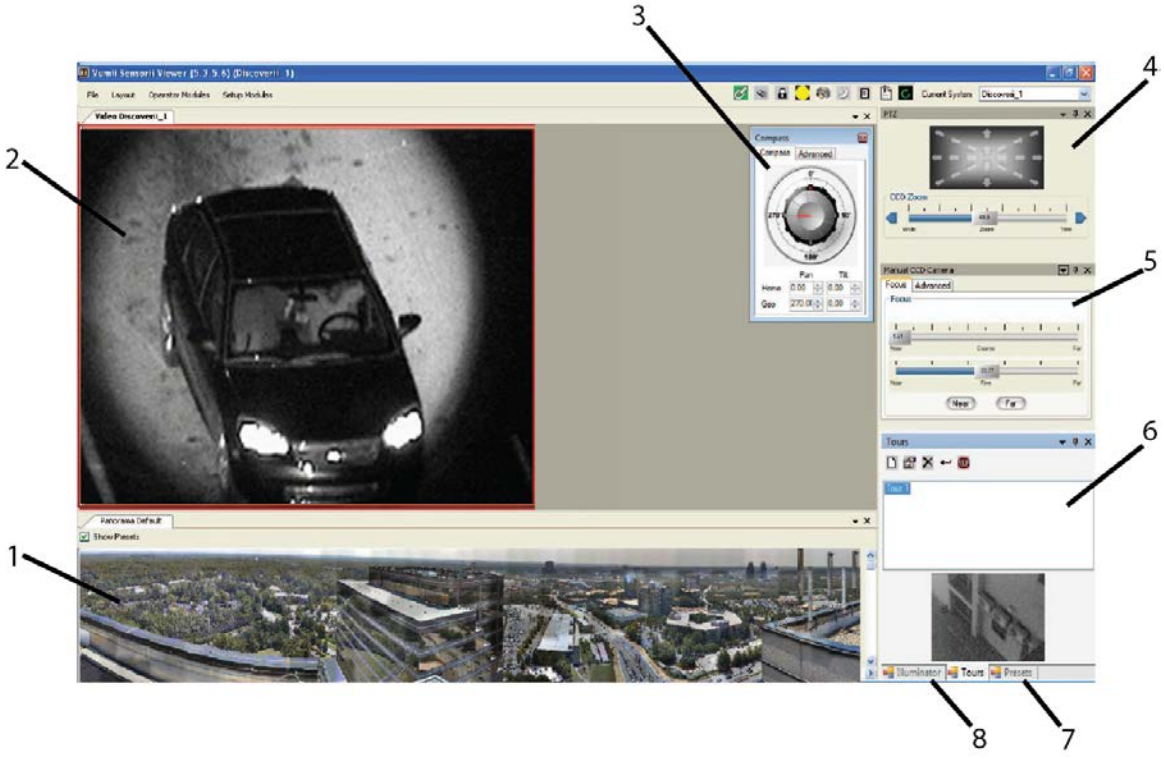
The Layout Setup can include any combination and arrangement of the following windows (see Figure 2-4):

- Live Video Window (2) – 🗁Section 2.4.1)
- PTZ Window (4) – 🗁Section 2.4.2
- Manual CCD Camera (5) – 🗁Section 2.4.3)
- Presets Window (7) – 🗁Section 2.4.4
- Tours Window (6) – 🗁Section 2.4.5
- Panorama Window (1) – 🗁Section 2.4.6)
- Compass Window (3) – 🗁Section 2.4.7
- Aerial Map Window – 🗁Section 2.4.8
- Thermal Window – 🗁Section 2.4.9
- Fire Detection Window – 🗁Section 2.4.10
- Illuminator Window (9) - 🗁Section 2.4.4

NOTE

Control window availability is dependent on the current active camera system. Only a sample of the available windows are pictured below (🗁Section 2.6: Availability).

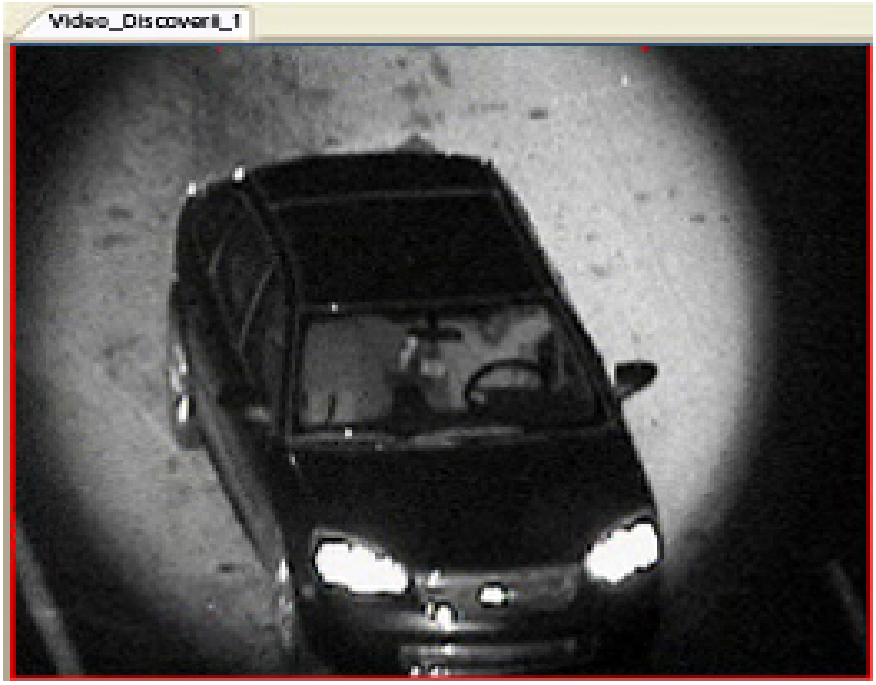
Figure 2-4: Workspace



2.4.1 Live Video Window

The live video window displays real time video from a predefined camera (see Figure 2-5).

Figure 2-5: Live Video Window



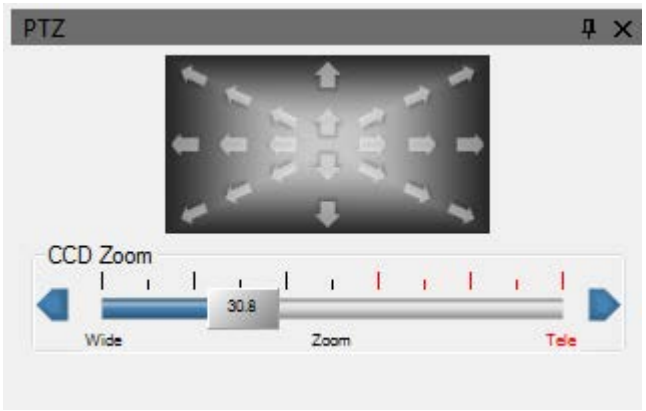
2.4.2 PTZ Window

The physical tilt and direction of the camera and the optical zoom are controlled from the **PTZ** window (see Figure 2-6).

For more details see:

- Section 4.8: Pan Tilt Setup
- Section 5.3.5: Optical Zoom Control
- Section 5.5.1: Camera Pan Tilt and Zoom Control
- Section 5.5.2: Zoom Control

Figure 2-6:PTZ Window



2.4.3 Manual CCD Camera Window

2.4.3.1 Focus Tab

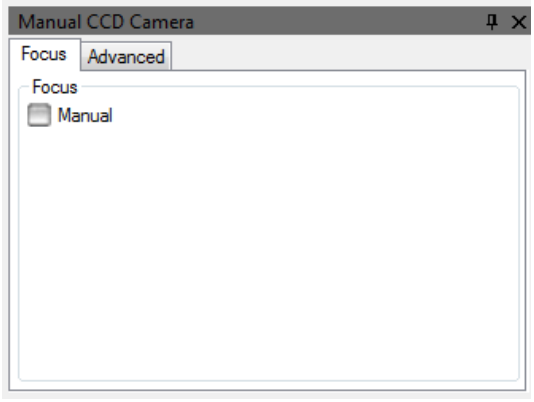
The focus tab enables activating the auto focus feature or manually adjusting the focus.

2.4.3.1.1 Auto Focus

To activate the auto focus feature for the manual CCD camera (see Figure 2-7):

Clear the **Manual** checkbox on the **Manual CCD Camera** window. The focus scrollbars are not displayed.

Figure 2-7: Manual CCD Camera Window– Auto Focus



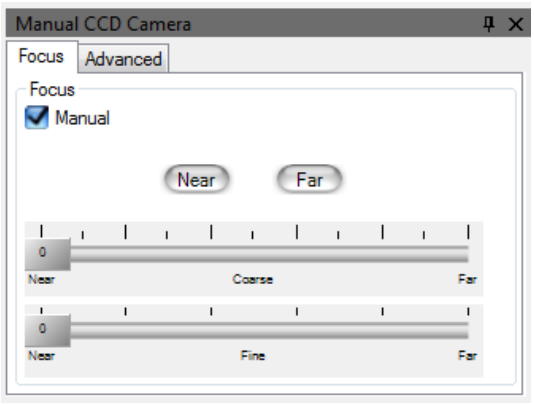
2.4.3.1.2 Manual Focus

To manually focus the CCD camera view:

1. Select the **Manual** checkbox on the **Manual CCD** window (see Figure 2-8).
2. Adjust the focus using the following scroll bars (Section 2.5: Scroll Bar Adjustment):

- Coarse focus or the Fine focus control scroll bar.
- Click the **Near** or **Far** buttons.

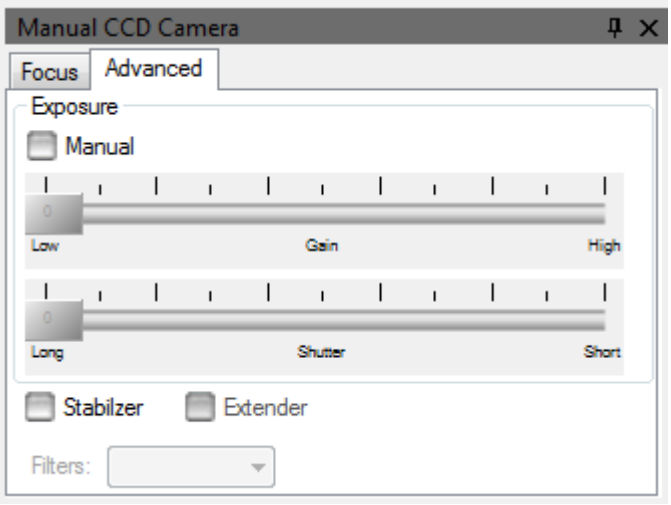
Figure 2-8: Manual CCD Camera Window– Manual Focus



2.4.3.2 Advanced Tab

The **Advanced** tab (see Figure 2-9) includes scroll bar adjustment of video gain and intensity levels.

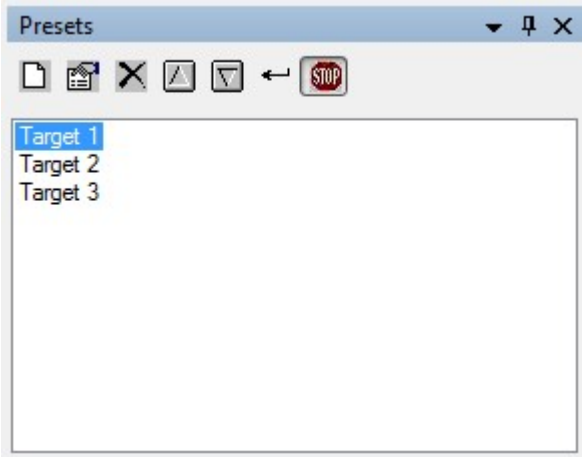
Figure 2-9: Manual CCD Camera Window – Advanced Tab



2.4.4 Presets Window

The **Presets** window contains options for tracking and quick positioning to predefined views (see Figure 2-10).

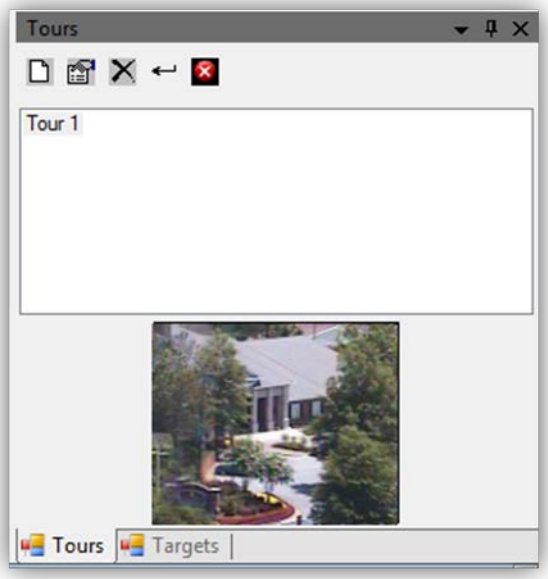
Figure 2-10: Presets Window



2.4.5 Tours Window

The **Tours** window displays a list of preprogrammed Tours (Section 1.4.4). The window buttons are used to manage the Tours (see Figure 2-11).

Figure 2-11: Tours Window – Tours Tab



2.4.6 Panorama Window

The panorama window displays a set of images combined into one panoramic view (see Figure 2-12). The panorama window displays Preset locations and enables designating a target location to position the camera.

Figure 2-12: Panorama Window

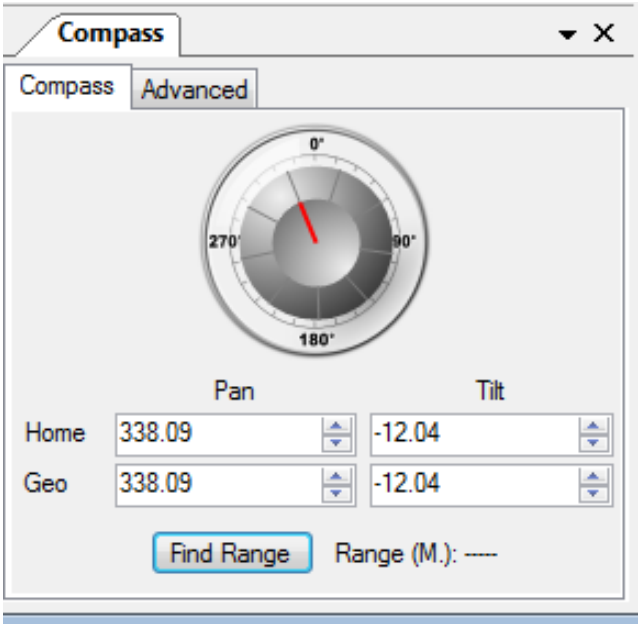
2.4.7 Compass Window

The options on the **Compass** tab in the **Compass** window (see Figure 2-13) set the pan and tilt of the Camera System using either true or relative bearings.

NOTE

The Find Range section appears only when LRF option is installed (🗁Section 5.9: Range Metering).

Figure 2-13: Compass Window

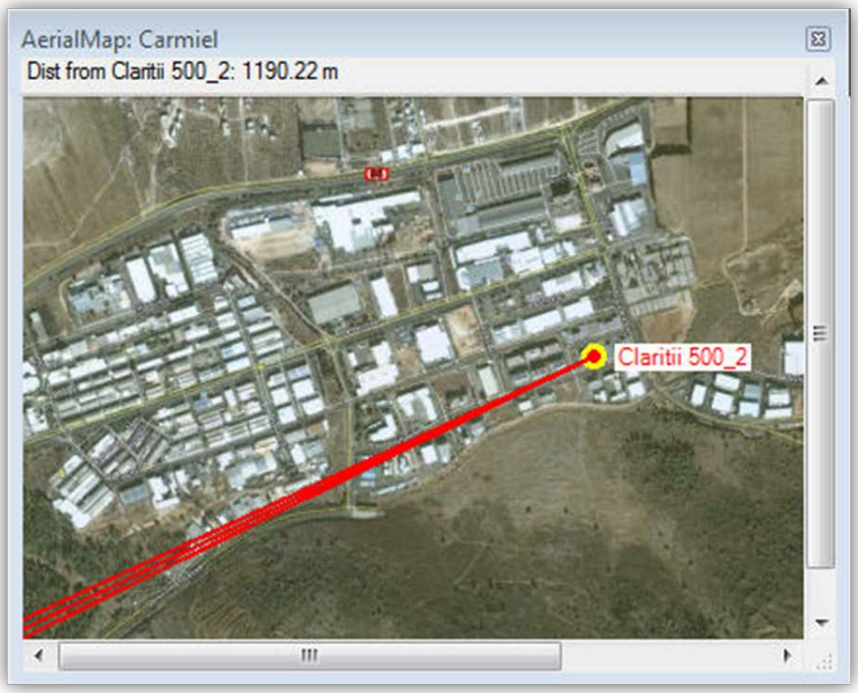


2.4.8 Aerial Map Window

The aerial map displays the protected area. The position of the Camera System base is shown on the map and markers indicate the camera FOV direction.

The **Aerial Map** window enables designating a target location for the camera and assists in identifying the area that the Camera System views.

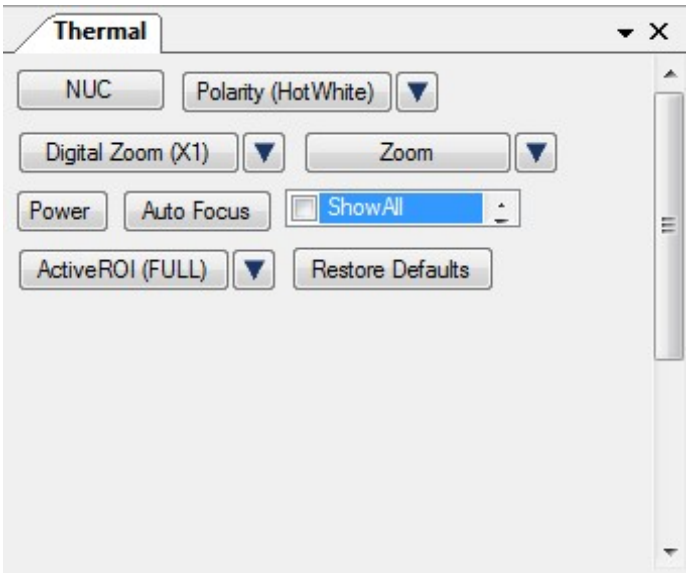
Figure 2-14: Aerial Map Window



2.4.9 Thermal Window

If the Camera System has a thermal camera, the **Thermal** window appears in the workspace. Use this window to control all functions of the thermal camera (🗁 Section 5.3 Thermal Operation)

Figure 2-15: Thermal Window



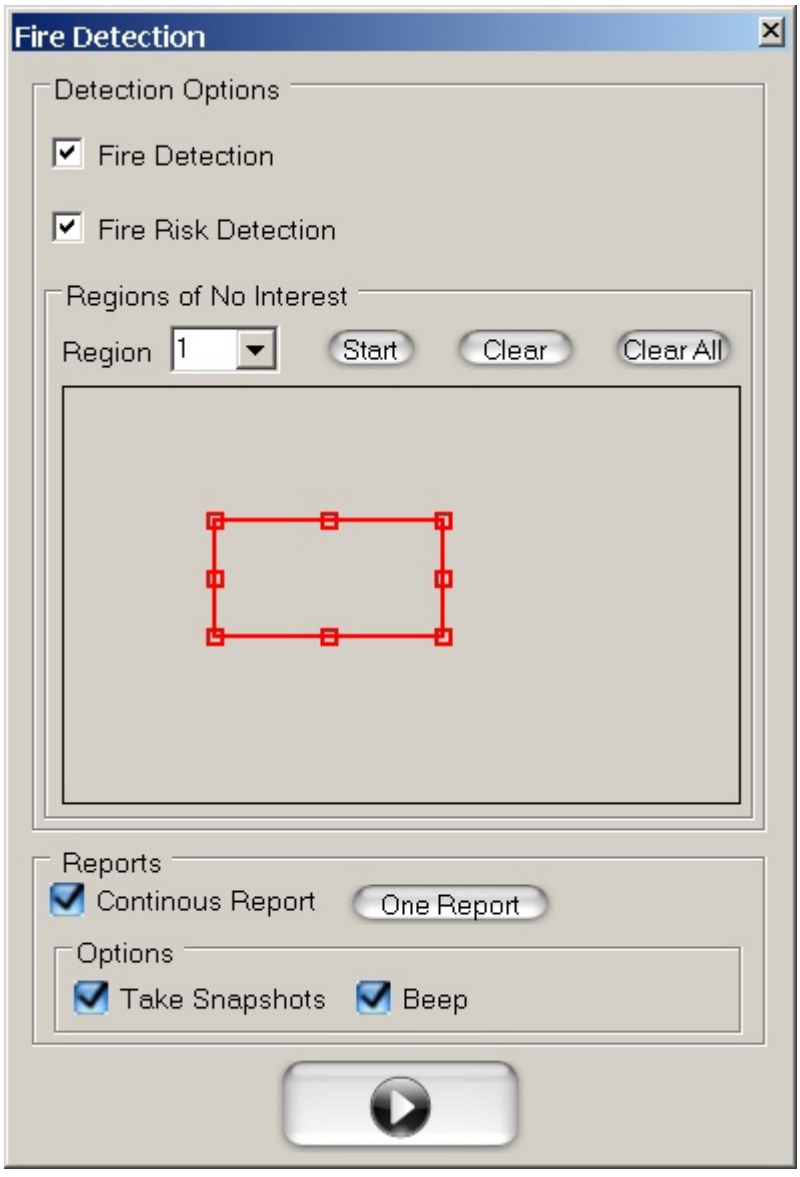
2.4.10 Fire Detection Window

The fire detection window controls the main operation and configuration of the fire detection feature (🗁 Section 4.7).

NOTE

Additional Fire Detection settings are controlled from the Fire Detection Configuration window (🗁 Section 4.7).

Figure 2-16: Fire Detection Window



2.4.11 Illuminator Window

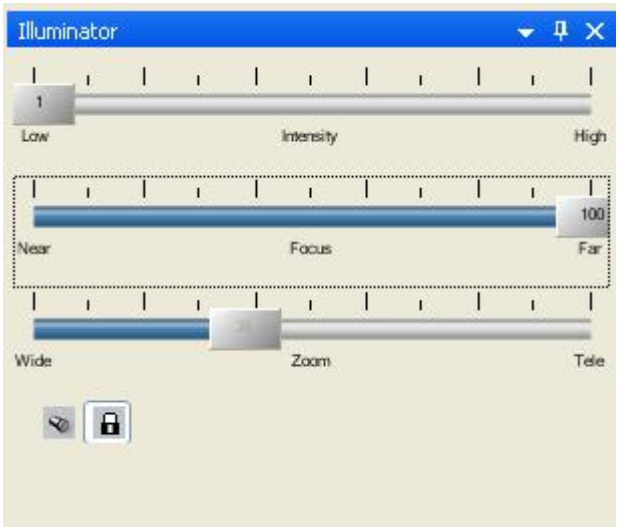
NOTE

This section is relevant only for the Discoverii system.

The Illuminator window enables controlling the settings of the laser beam illuminator and includes the following (see Figure 2-17):

- **Intensity Slider Control** – controls the intensity of the laser beam
- **Focus Slider Control** – controls the focus of the laser lens
- **Zoom Slider Control** – controls the zoom of the laser lens
- **Illuminator Button** – activates and deactivates the laser
- **Slave (Lock) Button** – slaves the laser zoom to the imager zoom or releases it

Figure 2-17: Illuminator Panel



2.5 Scroll Bar Adjustment

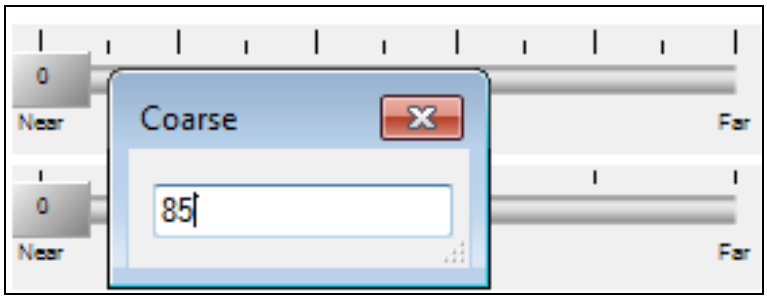
Several windows have scroll bars that enable control of camera parameters using either of the following methods (see Figure 2-18):

- Click the slider control.
- Click the scroll bar button and move it to the relevant position.
- For scroll bars with navigation arrows (located at either end of the scroll bar), click the arrows to move the scroll bar button. Clicking and holding the arrow increases the speed of the adjustment.

Figure 2-18: 3.3 Scroll Bar Adjustment

- Right-click the slider control and type the relevant scroll bar position.

Figure 2-19: Slider Control Dialogue box



2.6 Availability of Sensorii Functions

The availability of some Sensorii functions is dependent on the camera connected to Sensorii.

Table 2-1 displays the availability of Sensorii functions according to the camera type.

Table 2-1: Sensorii Functions Availability

Model/Function	Defining a Camera System (3.4)	Homing Verification (4.1.2)	PTZ Window (2.4.2)	Pan Tilt Setup (4.8)	Map Scaling (4.3)	Presets Window (2.4.4)	Tours Window (2.4.5)	Manual CCD Camera (2.4.3)	Aerial Map Setup (4.5)	Compass Window (2.4.7)	Thermal Camera Configuration (4.2)	Thermal (2.4.9)	Remote Power Control (5.3.6)	Panorama Setup (4.3)	Fire Detection (5.8)	Using TCP/IP(3.5.1.1)	Range Metering (5.9
Sii AT 25µ	■					■					■	■	■			2	
Sii AT PTZ 25µ	■	■	■	■	■	■	■		■	■	■	■	■	■		2	
Sii AT 17µ	■					■					■	■	■		1	2	
Sii AT PTZ 17µ	■		■	■	■	■	■		■	■	■	■	■	■			
Sii ML 25µ	■					■					■	■	■			2	
Sii ML PTZ 25µ	■	■	■	■	■	■	■		■	■	■	■	■	■		2	
Sii ML 17µ	■					■					■	■	■		1	2	
Sii ML PTZ 17µ	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
Accuracii AT Series 25µ	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
Accuracii AT Series 17µ	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
Accuracii ML Series 25µ	■	■	■	■	■	■	■	■	■	■	■	■	■	■			■
Accuracii ML Series 17µ	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■
Accuracii XR Uncooled Series 17µ	■	■	■	■	■	■	■	■	■	■	■	■	■	■			■
Accuracii XR Cooled Series 15µ	■	■	■	■	■	■	■	■	■	■	■	■	■	■			■
Claritii	■	■	■	■	■	■	■	■	■	■				■			
Sii XR	■										■	■				■	
Discoverii	■	■	■	■	■	■	■	■	■	■	■	■		■		■	

- 1 – with FD option
- 2 – with TCP/IP

3. Communication Settings

This chapter describes tasks associated with application installation and creating communication with a camera system

The tasks described in this chapter are performed by the system administrator and include:

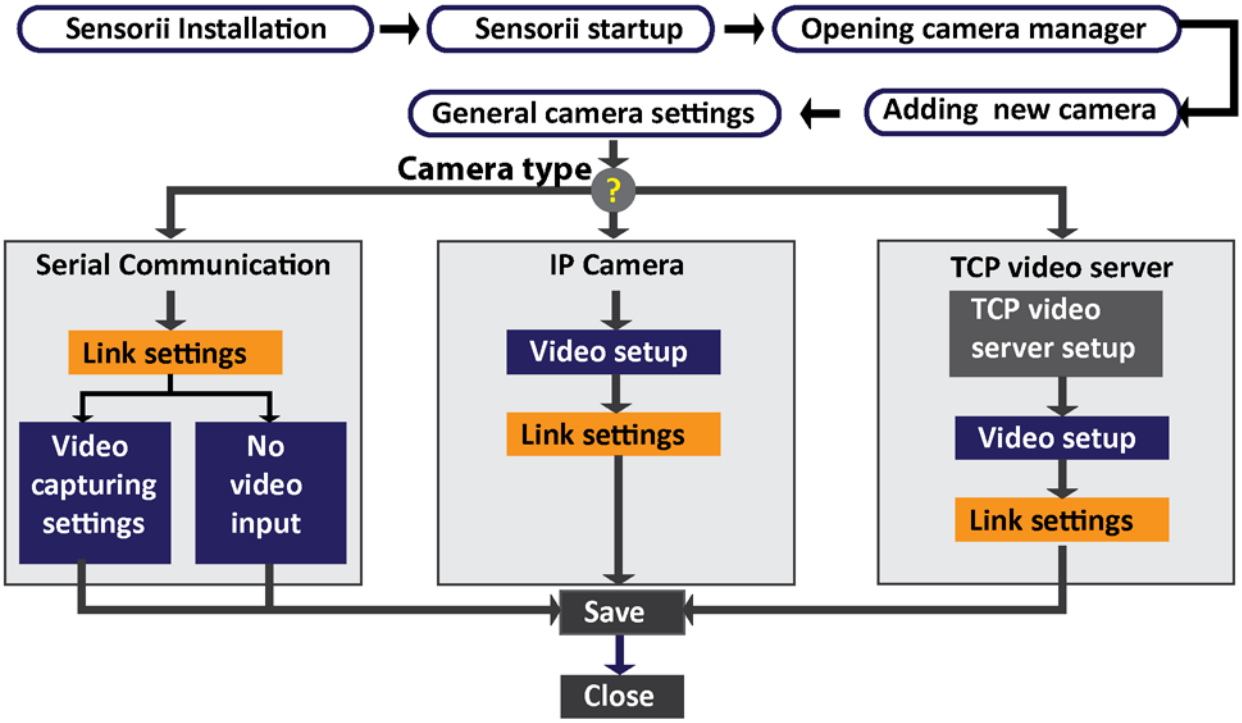
- Section 3.2: Application Installation
- Section 3.3: Sensorii Startup
- Section 3.4: Defining a Camera System
- Section 3.5: Advanced Settings
- Section 3.6: Client Server Configuration

3.1 Typical Workflow for Communicating with a Camera System

Figure 3-1 illustrates the procedure of establishing communication with a camera system through Sensorii.

The beginning steps of Adding a New Camera and General Camera Settings are common to all camera systems. Later steps are dependent on whether the type of camera system being used is a System using Serial Communication, a System using IP Communication, or a System using an External TCP Video Server.

Figure 3-1: Typical Workflow for Communicating with a Camera System



3.2 Application Installation

It is recommended to close all other applications running on the computer before installing Sensorii.

NOTE

The latest version of Sensorii and updates can be downloaded from ftp://ftp.vumii.com/Documentation/Sensorii_Software/

NOTE

Previous versions of Sensorii must be uninstalled before installing any new or updated versions

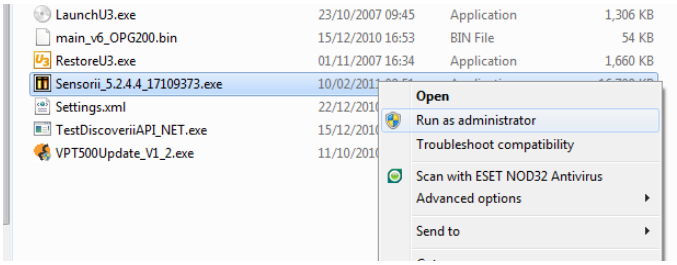
NOTE

Installation requires installing Microsoft .NET Framework 4.0 or later which can be downloaded from Microsoft.com. Such .NET is included in late versions of Windows 7 and Windows 8.

To install Sensorii application:

3. Navigate to the directory where Sensorii setup file is located. Right click the **APP_Sensorii_Complete_X.X.X.X** set up file (see Figure 3-2) and select **Install** from the floating menu. The **Open File Security Warning** screen opens.

Figure 3-2: Install File Command

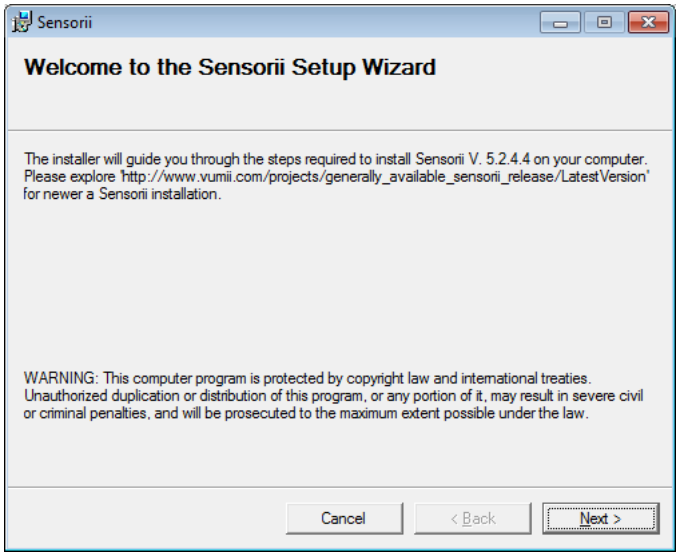


NOTE

This process may vary dependent on your computer's Operating System

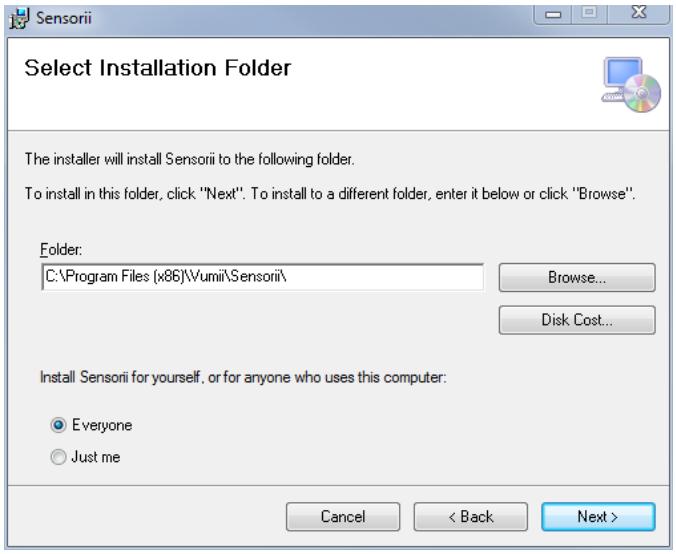
4. Click the **Run** button. Sensorii **Welcome** screen opens (see Figure 3-3).

Figure 3-3: Sensorii Installer Welcome Screen


Sensorii
Welcome to the Sensorii Setup Wizard
The installer will guide you through the steps required to install Sensorii V. 5.2.4.4 on your computer. Please explore 'http://www.vumii.com/projects/generally_available_sensorii_release/LatestVersion' for newer a Sensorii installation.
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel
< Back
Next >

5. Click the **Next** button. The **Select Installation Folder** window opens (see Figure 3-4).

Figure 3-4: Select Installation Folder Window


Sensorii
Select Installation Folder
The installer will install Sensorii to the following folder.
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".
Folder:
C:\Program Files (x86)\Vumii\Sensorii\
Browse...
Disk Cost...
Install Sensorii for yourself, or for anyone who uses this computer:
Everyone
Just me
Cancel
< Back
Next >

6. Click the **Browse** button and select the desired installation folder, **OR** leave the default path which appears in the **Folder** option box.

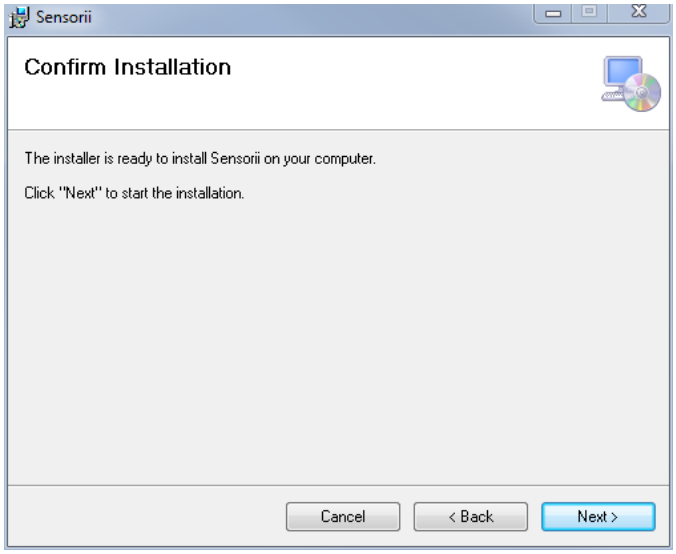
7. Optional: Click the **Disk Cost...** button to view disk space required for installation.

8. Select one of the user type options:

- **Everyone** – application is accessible by all user accounts.
- **Just me** – application is accessible by the installer's account only.

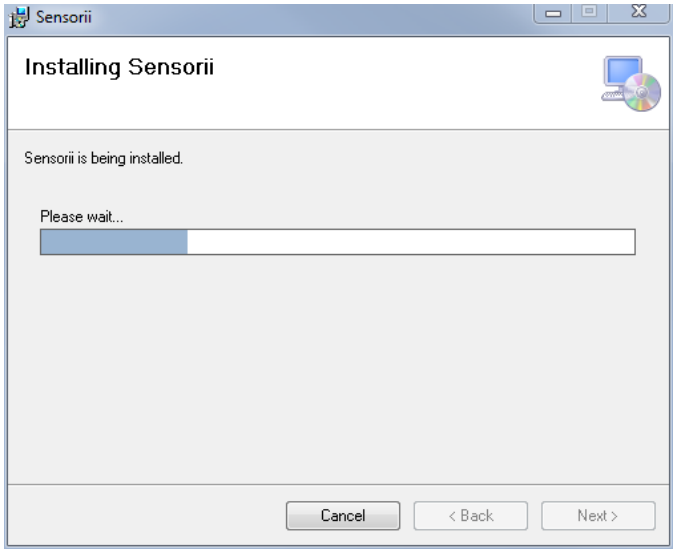
9. Click the **Next>** button. The **Confirm Installation** window opens (see Figure 3-5).

Figure 3-5: Sensorii Installer Confirmation


Sensorii
Confirm Installation
The installer is ready to install Sensorii on your computer.
Click "Next" to start the installation.
Cancel
< Back
Next >

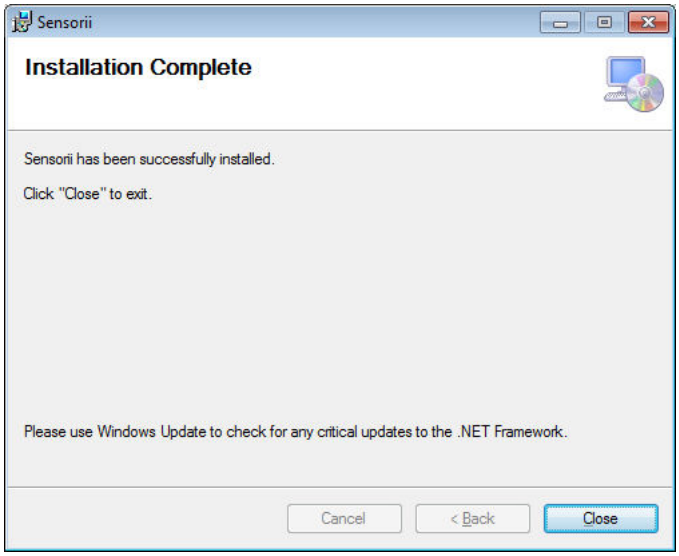
10. Click the **Next** button to start the installation process. The **Installing Sensorii** window opens and the installation begins. Progress is shown in the progress bar (see Figure 3-6).

Figure 3-6: Sensorii Installer – Installation Progress



When the installation is complete, the **Installation Complete** window opens (see Figure 3-7).

Figure 3-7: Sensorii Installer – Final Screen



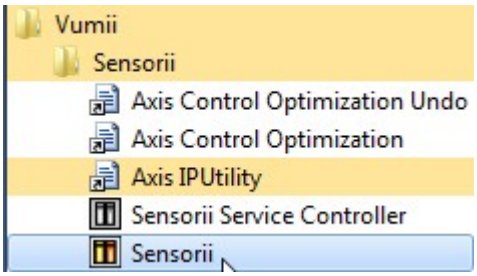
11. Click the **Close** button.

3.3 Sensorii Startup

To start Sensorii application:

1. Click the Windows **Start** button.
2. Select **All Programs** ➔ **Vumii** ➔ **Sensorii** ➔ **Sensorii** (see Figure 3-8).

Figure 3-8: Vumii Menu in MS Windows Start Menu



Sensorii workspace appears (🗁 Chapter 2.4: Workspace).

3.4 Defining a Camera System

Sensorii can be set up to control several different Camera Systems with different features and parameters. Use the Camera Manager function to define and maintain the parameters used to communicate with each of the systems.

This section reviews the tasks associated with defining and maintaining the camera's communication parameters and includes:

- Section 3.4.1: Starting the Camera Manager
- Section 3.4.2: Adding a New Camera
- Section 3.4.3: General Camera Settings
- Section 3.4.4: Camera with Serial Communication
- Section 3.4.5: Communicating through TCP Video Server
- Section 3.4.6: Communicating with IP Camera System
- Section 3.4.7: Saving Camera Settings

3.4.1 Starting the Camera Manager

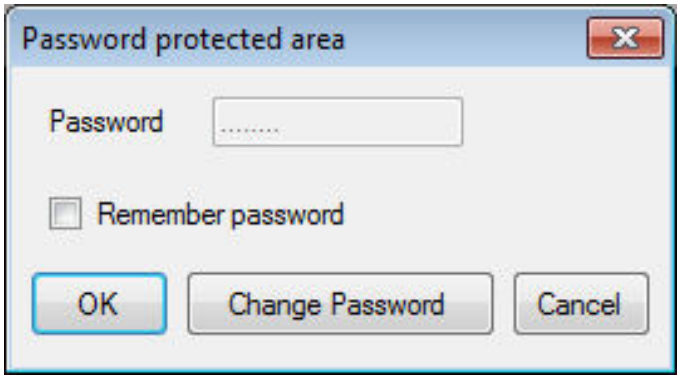
1. Select **Setup Modules** > **Camera Manager** from the main menu.
2. If the **Password protected area** dialog box opens (see Figure 3-9) type the password in the **Password** text box and click the **OK** button.

NOTE

The default password is ***passpass****. It is recommended to click the* ***Change Password*** *button and set a new password.*

The ***OK*** *button is available only after a correct password is typed.*

Figure 3-9: Setup Modules Password Window

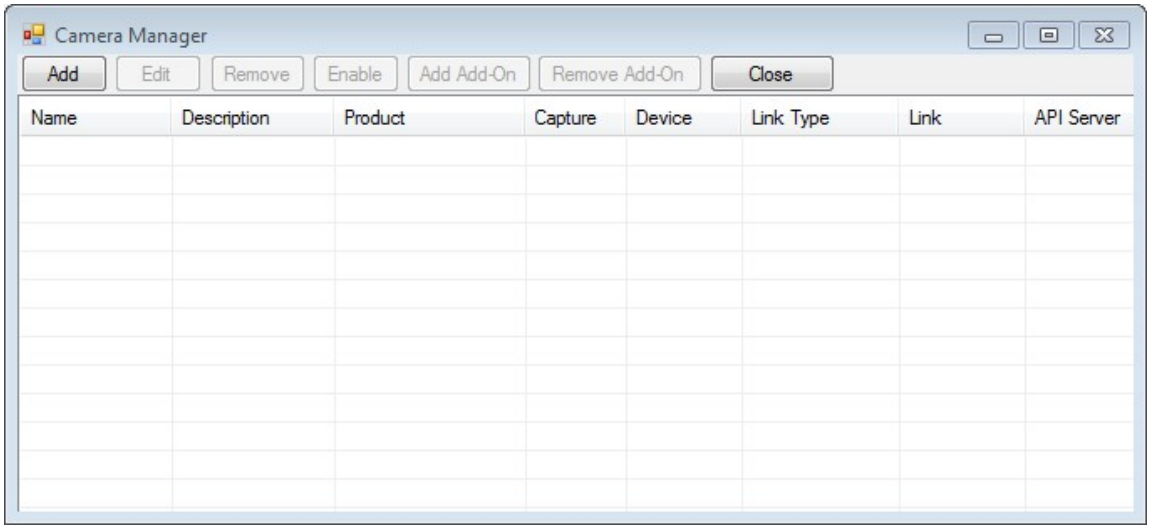


The Camera Manager window opens (see Figure 3-10).

3.4.2 Adding a New Camera

To add a new camera system, click the **Add** button located in the **Camera Manager** window. The **Camera Setup** window opens (see Figure 3-11),

Figure 3-10: Camera Manager window



3.4.3 General Camera Settings

Perform the following steps via the **Camera Setup** window (see Figure 3-11):

1. Select the relevant camera system from the **Model Group** option box. The default camera system name is displayed in the **Name** text box.

NOTE

Vumii updated its model group names. Use the Appendix B: Model Group Conversion Table on page 144 to select the proper model group according to your camera name.

NOTE

*Some of the new models do not appear in the **Model Group** option list. Use the conversion table in Chapter 7 to select the proper model group according to your camera name*

TIP

The camera system name is editable only during its creation.

2. Type a description for the camera system in the **Description** text box.
3. Select one of the lens types from the **Lens** option box when relevant. When relevant, select the lens address from the **Device Address** option box.
4. Select the **Pan/Tilt** check box when the camera is installed on a PT unit **IS THIS NEEDED**?.

Notes for Accuracii ML users

*Verify that the **DP E-series** check box is selected when using a new Accuracii ML model.*

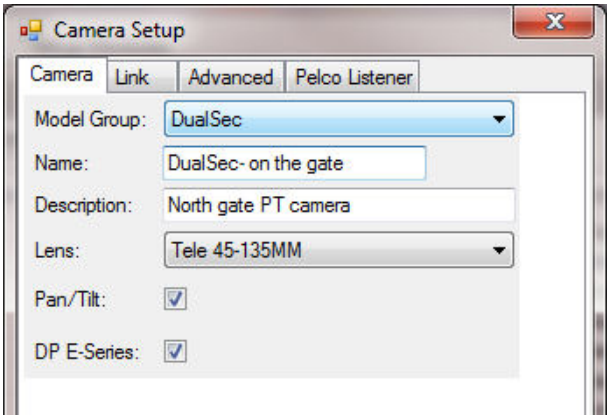
Notes for Discoverii users

*Select the **Thermal Add-On** checkbox when an additional thermal imager is installed.*

*Select the **Embedded PC** checkbox when using Discoverii™ 3000 with the Embedded Computer.*

*Verify that the **Nir-Or Laser Regulator** checkbox is cleared when using an old version of Discoverii.*

Figure 3-11: Camera Setup Window CHANGE PICTURE



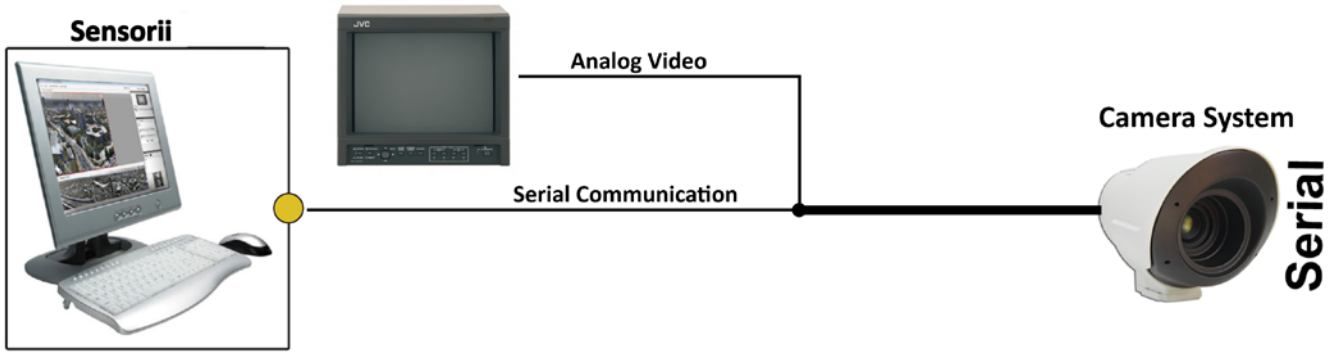
Perform the tasks described in one of the following sections according to the method used to communicate with the camera system:

- Camera with Serial Communication (Section 3.4.4)
- Communicating through TCP Video Server (Section 3.4.5)
- Communicating with IP Camera System (Section 3.4.6)

3.4.4 Camera with Serial Communication

This procedure provides a set of instructions for communicating with a camera system with serial communication and analog video output.

Figure 3-12: Camera with Serial Communication



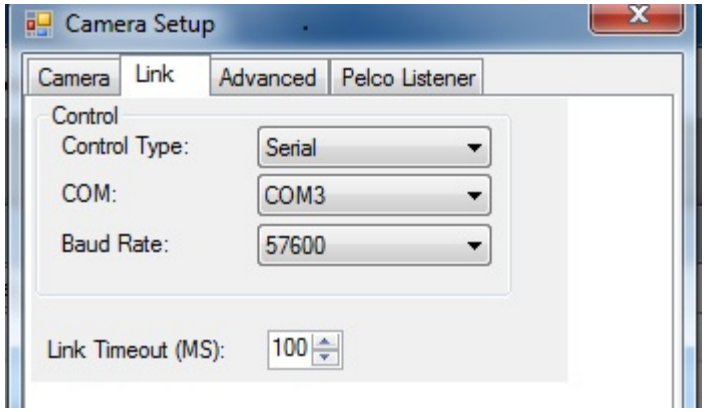
3.4.4.1 Link Settings

1. Select the **Link** tab (see Figure 3-13).
2. Select the **Serial** option from the **Control Type** option box.
3. Select from the **COM** option box the computer serial port number used to communicate with the camera system.
4. Select the relevant speed from the **Baud Rate** option box.

NOTE

Default baud rates of all Vumii camera models are found in chapter 8 Appendix C: Default Communication Settings.

Figure 3-13: Link Tab-Serial Communication Setup



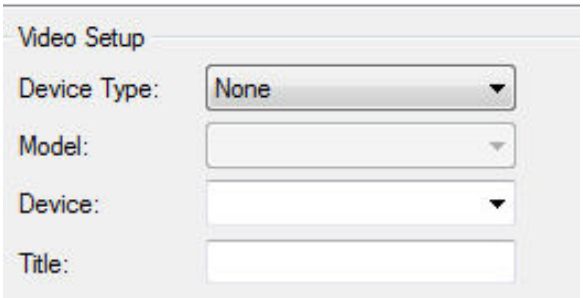
5. Set the video setting to one of the following options:
   - Video is Displayed on Separate Monitor (🗁Section 3.4.4.2)
   - Analog Video Capturing (🗁Section 3.4.4.3)
6. Click the **Save** button.

3.4.4.2 Video is Displayed on Separate Monitor

When the camera video is connected directly to a video monitor and is not displayed on Sensorii:

1. Select the **Video Setup** tab.
2. Select **None** from the **Device Type** option box to disable digital video transmission.

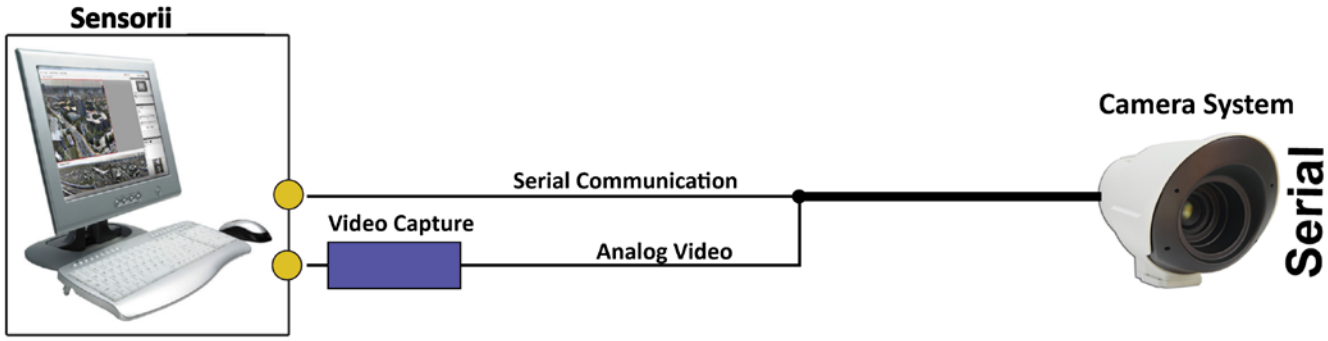
Figure 3-14: Video Setup – No Video Input



3.4.4.3 Analog Video Capturing

This section provides a set of instructions for displaying the analog video on Sensorii window using Dshow video capturing device.

Figure 3-15: Camera with Serial Communication and Video Capture Device



1. Connect the camera analog video output to the Dshow capturing device and connect the device to one of the computer USB ports.

On the video setup area:

2. Select **DSHOW** from the **Device Type** option box.
3. Click the **Detect** button. A list of identified devices appears.
4. Select the relevant video capturing device from the **Device** option box.

On the **General** tab perform:

5. Select the port number to which the capturing device is connected from the **Input** option box.
6.

3.4.5 Communicating through TCP Video Server

This procedure provides a set of instructions for communicating with a System using an External TCP Video Server (🗁Section 1.3.3).

Figure 3-16: Communicating through TCP Video Server

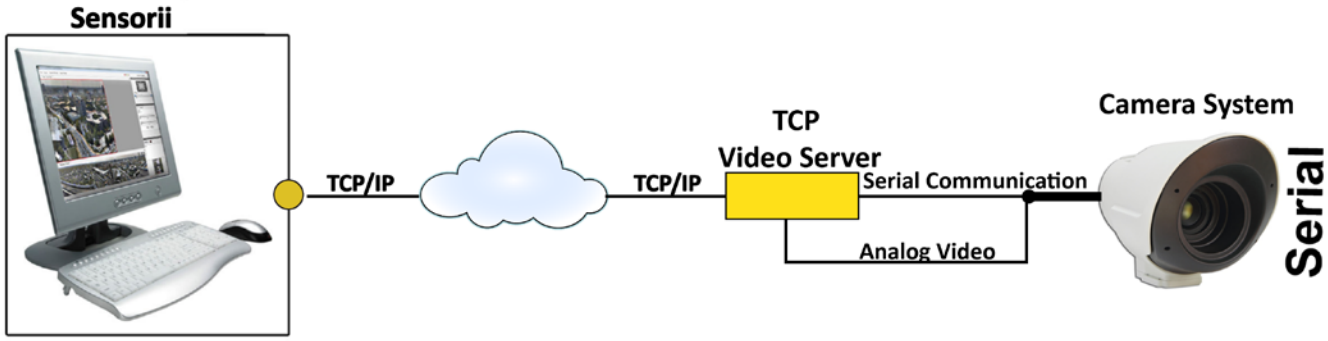
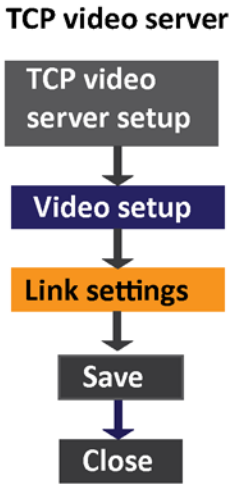


Figure 3-17: Workflow Diagram

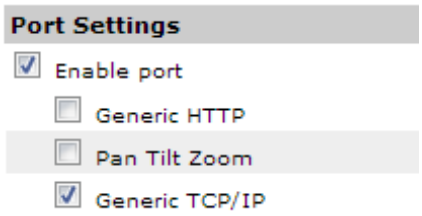


3.4.5.1 TCP Server Configuration

1. Open the Axis TCP server configuration interface.
2. Select **Axis** from the **Device Type** option box.
3. Select **System Options** > **Ports & Devices** > **COM Port** from the left tool bar.
4. Define the following parameters:

- **Enable port** is selected
- **Generic TCP / IP** is selected

Figure 3-18: Communicating with IP Camera



NOTE

It is assumed that the Axis TCP server is configured according to the customer network structure.

NOTE

*When using Axis IP encoders, run the **Axis Control Optimization** utility to boost performance between the Sensorii PC and the Axis encoder.*

*Open the utility from the start menu by selecting **Programs** > **Vumii** > **Sensorii** > **Axis Control Optimization**.*

*Changes made by this utility can be reversed using the **Axis Control Optimization Undo** utility found in the same location.*

3.4.5.2 Video Setup

On the Video Setup area (see Figure 3-19):

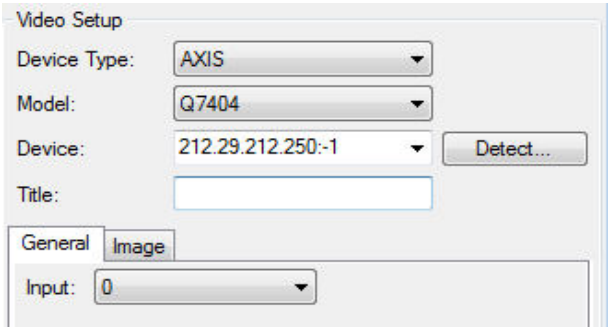
1. Select **Axis** from the **Device Type** option box.
2. Select the relevant TCP video server **Model**.
3. In the **Device** text box, type the axis video server IP address followed by ":-1"(e.g. 212.29.212.250:-1).

NOTE

*Use the **Test Video** button to verify communication with camera*

Use the tabs to set input, image and security information. **NO SECURITY INFORMATION TAB IN SOFTWARE VERSION USED OR IN Fig 3-19**

Figure 3-19: Video Setup for Axis TCP Video Server



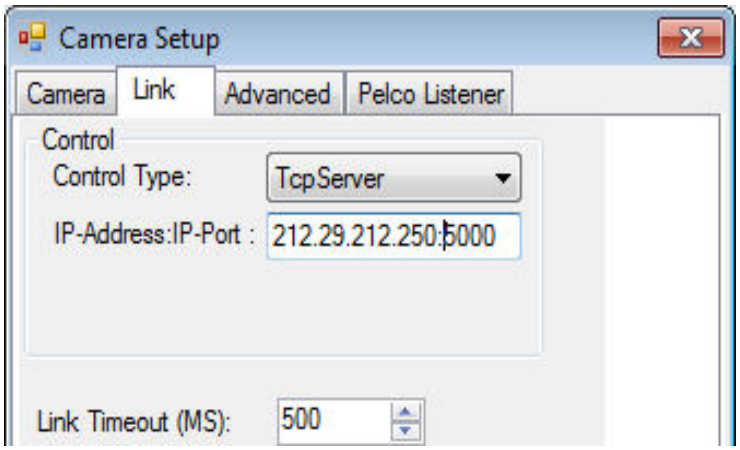
3.4.5.3 Link Settings

1. Select the **Link** tab and verify that (see Figure 3-20):

- **Control Type** – contains Tcp Server
- **IP-Address:IP Port** – contains the IP address of the axis video server followed by the axis listener port number (e.g. 212.29.212.250:5000).

2. Set the **Link Time Out** to relevant delay time according to the quality of your network.
3. Click the **Save** button.
4. Click the **Close** button on the camera manager window.

Figure 3-20: Link Setup for Axis TCP Video Server



NOTE

If the system has more than one imager installed an ***Add add-on*** *dialogue box will open See Section 3.5.2 Adding a Slave Camera.*

3.4.6 Communicating with IP Camera System

This procedure provides a set of instructions for communicating with a camera system that uses embedded IP communication (🗁Section 1.3.2: System using IP).

Figure 3-21: Communicating with IP Camera

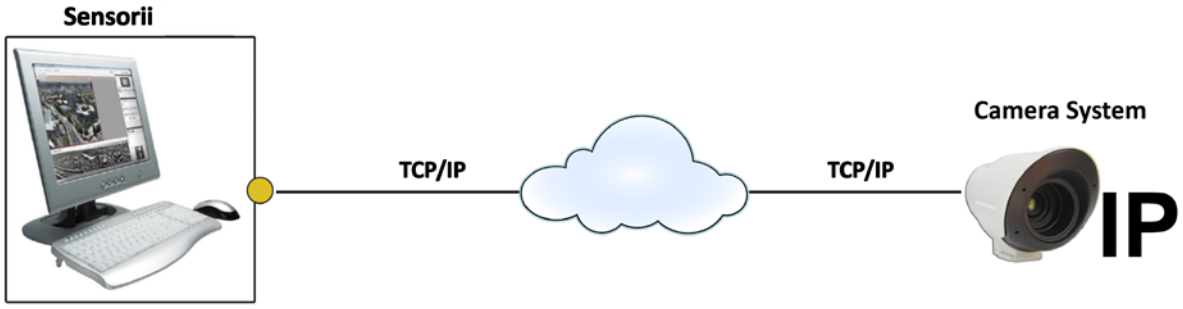
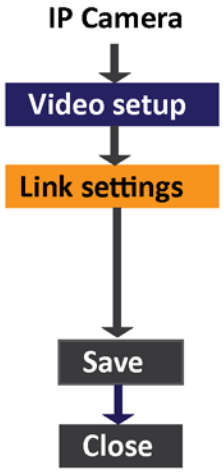


Figure 3-22: Workflow Diagram

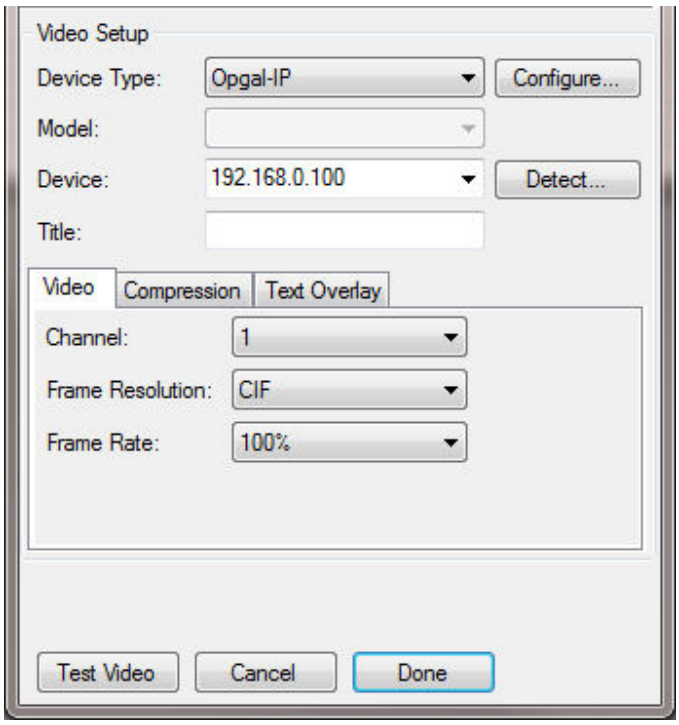


3.4.6.1 Video Settings

On the Video Setup area (see Figure 3-23):

1. Select **Opgal-IP** from the **Device Type** option box.
2. In the **Device** text box, type the camera system IP address followed by ":-1" (camera default IP is 192.168.0.100:-1).

Figure 3-23: Video Setup for IP Camera System



NOTES

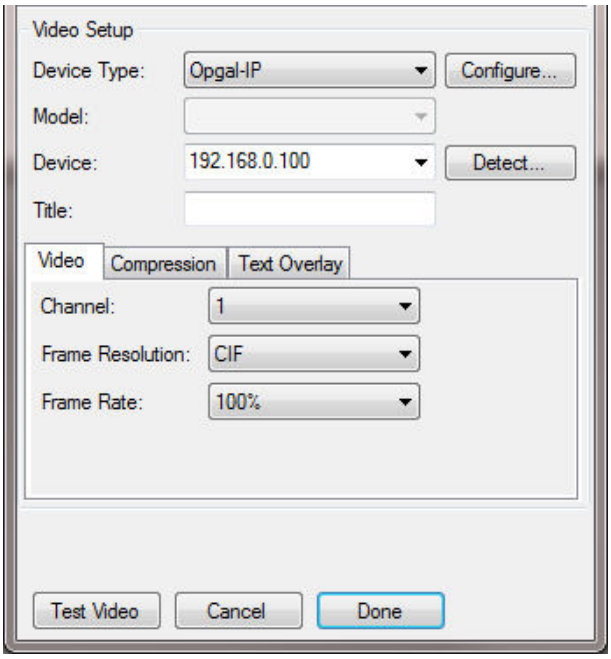
When communicating with IP camera, the computer IP address must be set to: 192.168.0.99 with 255.255.255.0 mask sub-net.

3.4.6.1.1 Video Tab Settings

To set up the video parameters (see Figure 3-24):

1. Verify that the **Video** tab is selected.
2. Verify the video settings.
3. Select one of the following options from the **Channel** dropdown list box:
   - 1
   - 2
4. Select one of the following options from the **Frame Resolution** dropdown list box:
   - D1 - 720x480 (NTSC), 720x576 (PAL)
   - CIF - 176x120 (NTSC), 176x144 (PAL)
   - QCIF 176x120 (NTSC), 176x144 (PAL)
   - VGA 640 x 480
5. Select one of the following options from the **Frame Rate** dropdown list box:
   - 100% (NTSC-30FPS/PAL-25FPS) - the system default is PAL.
   - 50%
   - 20%
   - 10%
   - 1FPS

Figure 3-24: Video Settings



3.4.6.1.2 Video Compression Tab Settings

Verify the compression settings:

1. Click the **Compression** tab (see Figure 3-25).
2. Select one of the following video compression options from the **Encoder Type** dropdown list box:

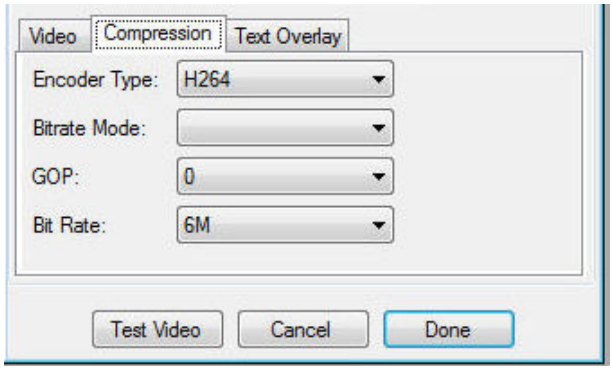
- H264
- MPEG
- MPEG-4

3. In order to maintain a consistent video image quality, the bit rate increases as the amount of activity in the viewing target increases. The increased bit rate requires a wider band width. Select one of the options from the **BitRate Mode** dropdown list box to prioritize either lower band width use or a higher quality image:

- **Constant** – bit rate and band width use remain constant. Used when the available band width for the system is limited. Lower image quality may result when activity in the viewing target increases and requires a bitrate which is higher than the target rate.
- **Variable** – bit rate and band width use increase to maintain a consistent image quality. Used in surveillance applications where there is a need for high quality video, particularly in viewing targets with a high level of activity.

4. Select the relevant number from the **GOP** dropdown list box. The GOP length is the number of frames between two consecutive I-frames. Increased GOP length can limit band width requirements, but may affect image quality.
5. Verify the **Bit Rate** in the dropdown list box.
6. Click the **Test Video** button. The Test Video window opens displaying the video image. Verify the picture quality of the video image.
7. Click the **Done** button.

Figure 3-25: Compression Settings



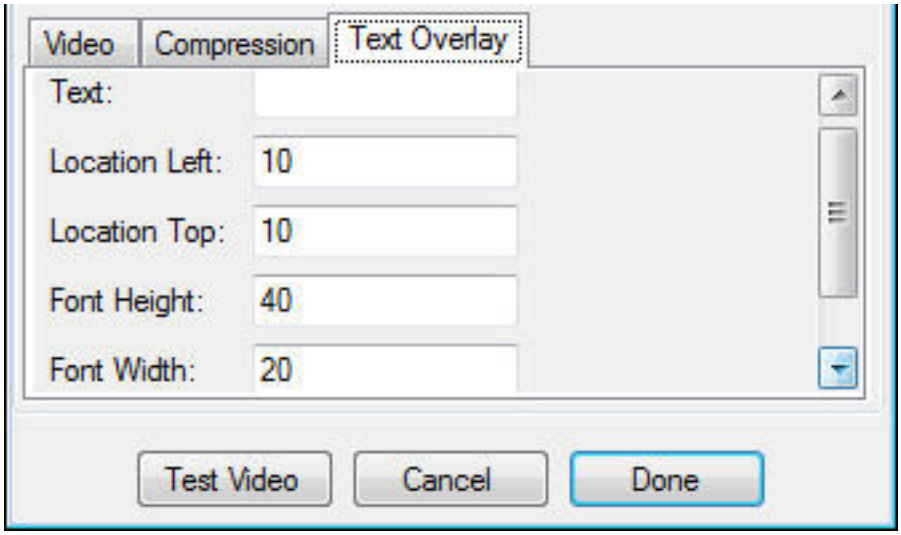
3.4.6.1.3 Text Overlay Tab Settings

The text overlay tab enables displaying a predefined text message on the video image.

To set a text message into the video stream:

1. Type the text you want to display in the **Text** text box (see Figure 3-26).
2. Type the screen coordinate of the text left side position in the **Location Left** text box.
3. Type the screen coordinate of the text top position in the **Location Top** text box.
4. Enter the font height and width in the **Font Height** and **Font Width** text boxes.
5. Select the font color from the **Color** option box
6. Click the **Test Video** button to view the text.
7. Click the **Done** button.

Figure 3-26: Text Overlay Settings



3.4.6.2 Link Settings

1. Select the **Link** tab and verify that (see Figure 3-11):

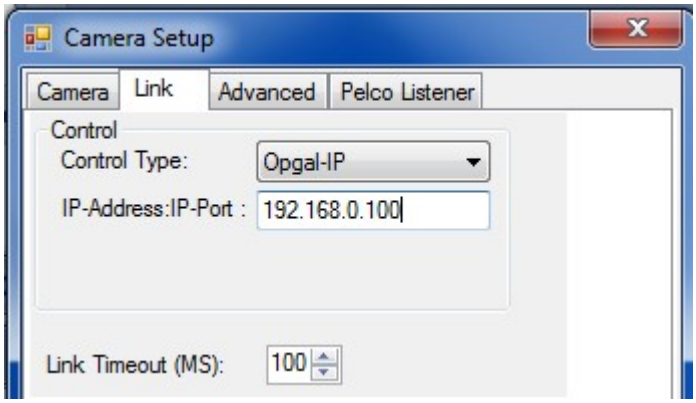
- **Control Type** – contains Opgal-IP
- **IP-Address:IP Port** – contains the IP address as defined on the video tab.

NOTES:

*The camera default IP address is:**192.168.0.100** .*

2. Set the **Link Time Out** to relevant delay time according to the quality of your network.
3. Click the **Save** button.
4. Click the **Close** button on the camera manager window.

Figure 3-27: Link Tab-IP Communication Setup



3.4.7 Saving Camera Settings

Before closing the **Camera Setup** window, click **Save** to save all new parameters.

NOTE

*Exiting the Camera Manager without clicking the **Save** button results in the loss of new and unsaved data.*

3.5 Advanced Settings

This section reviews additional Camera Manager setting that may be needed when defining a camera system:

- Section 3.5.1: Pelco Listener Configuration
- Section 3.5.2: Adding a Slave Camera
- Section 3.5.3: Video Test
- Section 3.5.4: Disabling a Camera
- Section 3.5.5: Enabling a camera
- Section 3.5.6: Removing a Camera

3.5.1 Pelco Listener Configuration

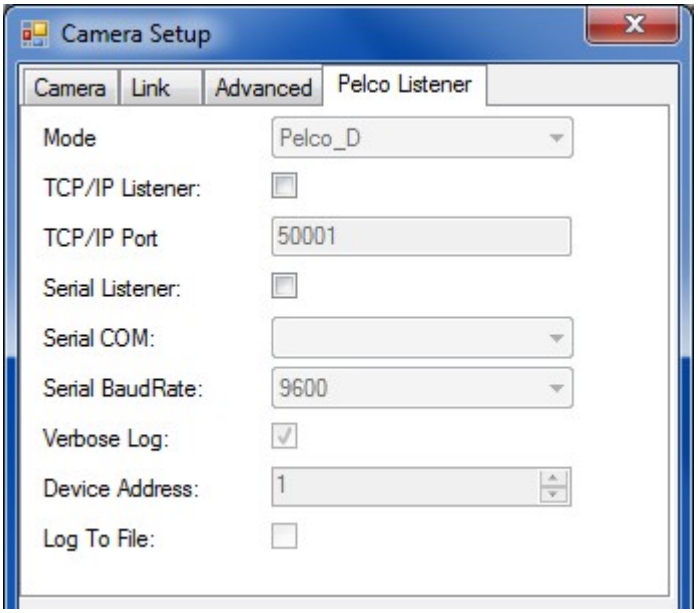
The Pelco Listener enables using a Pelco-D device to communicate directly with the camera instead of using Vumii protocol.

To configure communication with a Pelco-D device:

1. Select the **Pelco Listener** tab located on the **Camera Setup** window (see Figure 3-28).
2. Check one of the following check boxes to select the communication type:

- TCP/IP Listener (🗁Section 3.5.1.1: Using TCP/IP)
- Serial Listener (🗁Section 3.5.1.2: Using Serial Communication)

Figure 3-28: Pelco Listener Configuration



3.5.1.1 Using TCP/IP

To complete the Pelco TCP/IP configuration, type the port number in the **TCP/IP Port** text box.

3.5.1.2 Using Serial Communication

To complete the Pelco serial communication configuration:

1. Select the computer serial port from the **Serial COM** option box.
2. Select the appropriate baud rate from the **Serial Baud Rate** option box.

3.5.1.3 Additional Pelco Listener Settings

1. Check the **Verbose Log** check box to receive more detailed information in the communication log between the camera and Sensorii.
2. Select the Pelco device address from the **Device Address** option box.

NOTE

See chapter 8: Appendix C: Default Communication Settings for the default Pelco-D address.

3. Check the **Log to File** check box to automatically transfer all communications recorded in the log to a text file.

3.5.2 Adding a Slave Camera

When the Camera System includes an additional imager (e.g. thermal imager) the **Add Add-On** dialog box opens automatically when the camera parameters are saved for the first time.

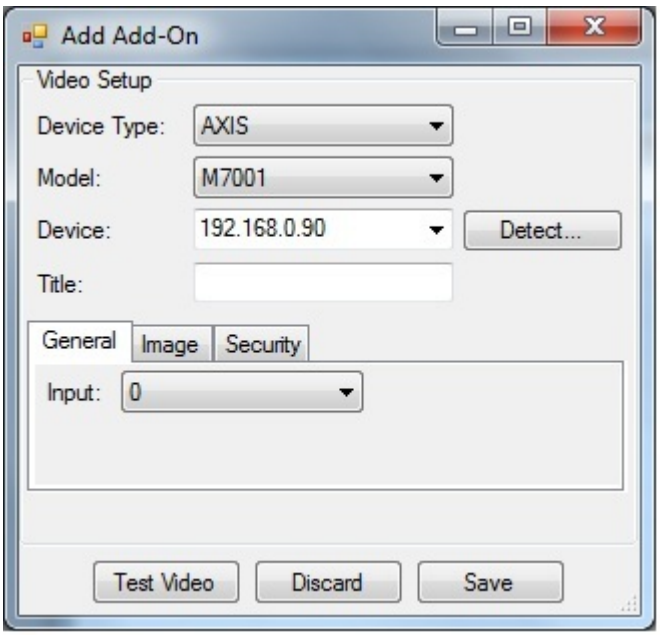
NOTE

*To edit the parameters of an add-on slave camera, select the add-on camera in the camera manager window and click the **Edit** button.*

To configure an add-on slave camera (see Figure 3-29):

1. Perform video setup for the additional imager.
2. Perform the Video Test to verify video is received properly (🗁Section3.5.3).
3. Click the **Save** button.

Figure 3-29: Add-On Dialog Box

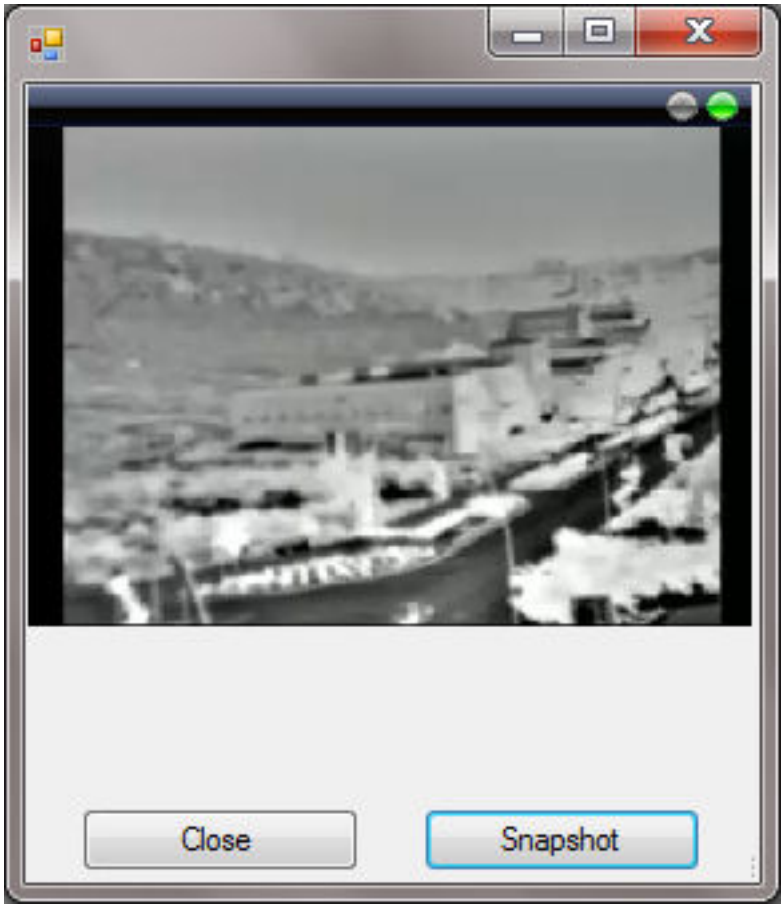


3.5.3 Video Test

After configuring the video output, test the video transmission:

1. Click the **Test Video** button located in the **Video** section of the **Camera Setup** window (see Figure 3-11). The **Video Test** screen opens displaying the video image received from the defined camera(see Figure 3-30).
2. Click the **Snapshot** button to save a snapshot image of the displayed video.
3. Click the **Close** button.

Figure 3-30: Video Test screen



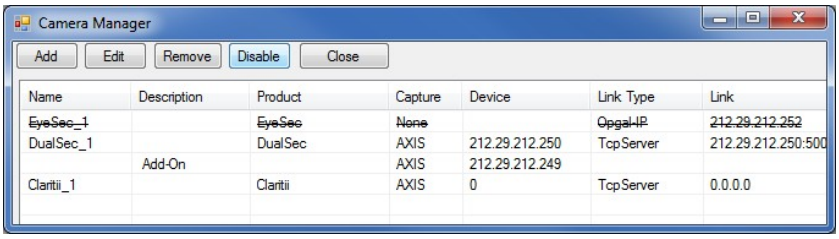
3.5.4 Disabling a Camera

Disabling a camera removes it from the Current System option box list (🗁Section 2.3: Upper Toolbar). The camera parameters, however, remain in the Sensorii system.

To disable a camera:

1. Select the relevant camera from the **Camera Manager** window.
2. Click the **Disable** button. The relevant camera appears with a strikethrough.

Figure 3-31: Disabling a Camera



3.5.5 Enabling a camera

To enable a camera that was disabled:

1. Select the relevant disabled camera from the **Camera Manager** window.
2. Click the **Enable** button. The relevant camera is enabled and appears without a strikethrough.

3.5.6 Removing a Camera

To remove a camera from the system

1. Select the relevant camera from the **Camera Manager** window.
2. Click the **Remove** button. The relevant camera is removed from the Camera Manager window.

3.6 Client Server Configuration

NOTES

This section is relevant for a Discoverii system with an Embedded Computer. All Discoverii systems purchased after January 1, 2012 include an embedded computer.

There are two ways to access the Embedded Computer:

- Direct connection of keyboard, mouse and video monitor.
- Remote desktop through the Ethernet.

3.6.1 Accessing the Embedded Computer Through a Remote Desktop

To access the Embedded Computer using a remote desktop application:

1. Select **Run** on the **Start** menu. (In **Windows 7** type "run" in the **search** box on the start menu.)
2. Type the command: **mstsc** followed by the relevant IP address (default IP address is 192.168.0.100).
3. Type the following (default) information in the password dialogue box:

- User name: Discoverii
- Password: discoverii.

NOTE

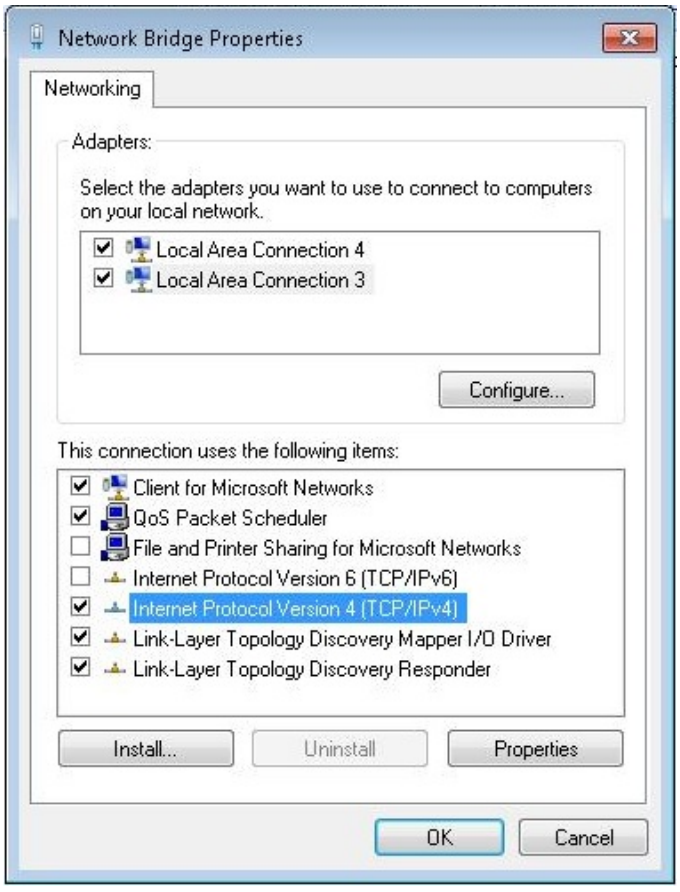
For security purposes, it is recommended to change the default username and password of the embedded PC. Contact Vumii, if assistance is required with this standard Remote Desktop (RDP) communication procedure.

3.6.2 Changing the IP Address of the Embedded Computer

To change the IP Address of the Embedded Computer:

1. Verify that there is communication with the Embedded Computer through the remote desktop.
2. Select **Control Panel** ➔ **Network and Internet** ➔ **Network Connections** from the Windows Start menu.
3. Click **Network Bridge**. The **Network Bridge Properties** dialogue box opens.
4. Select **Internet Protocol Version 4 (TCP/IP v4)** in the **This connection uses the following items** box.
5. Click the **Properties** button. The **Internet Protocol Version 4 Properties** dialogue box opens.
6. Type new TCP/IP information.

Figure 3-32: Network Bridge Properties



3.6.3 Initializing Client and Server Communication

NOTES

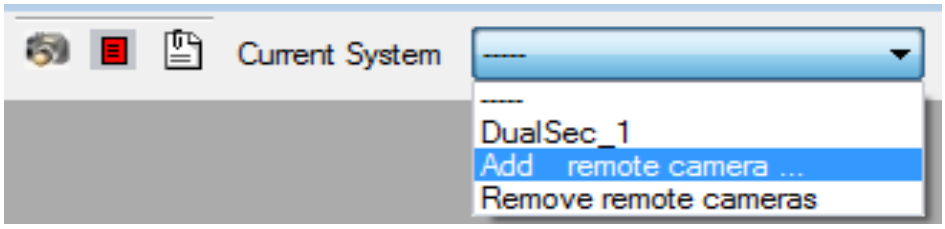
This section is relevant for a Discoverii system with an Embedded Computer. All Discoverii systems purchased after January 1, 2012 include an embedded computer.

This section reviews the tasks required to initiate communication between the operator computer with the Client application and the Embedded Computer that is running the Server application.

Perform the following steps via the Client application:

1. Select **Add remote camera**.. from the **Current System** option box in the upper toolbar of Sensorii workspace (see Figure 3-33).

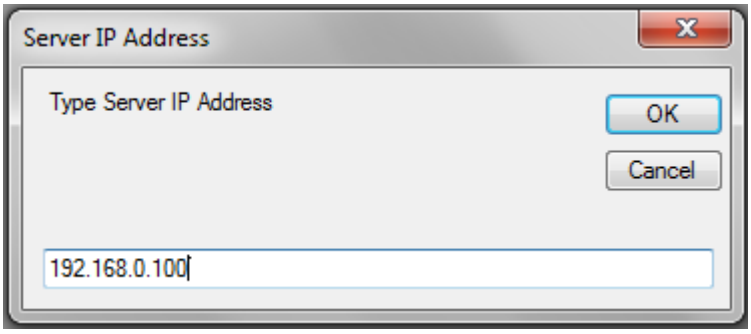
Figure 3-33: Current System Option Box



The **Server IP Address** window opens.

2. Type the IP address of the Embedded Computer.
3. Click the **OK** button.

Figure 3-34: Server IP Address Dialog Box



Communication is created between the Client application and the Server application The operator can now select one of the predefined camera systems from the **Current System** option box.

3.7 PT Address and Baud Rate Settings

The system's baud rate and network address is pre-set at the factory.

Depending on the model, the PT address and baud rate can be changed using either of the following methods:

3.7.1 Software Configuration

The PT address and baud rate are changed using a hyper terminal ASCII commands. For more details, refer to the relevant Accuracii Installation and Operation manual.

This section is relevant to the following models:

- *Accuracii AT*
- *Accuracii ML*
- *Accuracii XR*

3.7.2 Hardware Configuration

The PT address and baud rate are changed using a series of DIP switches. Factory set DIP switch settings must not be changed before consulting with Vumii.

This section is relevant to the following models:

- *Sii AT PTZ*
- *Sii ML PTZ*
- *Discoverii*
- *Claritii*

NOTE

Changing camera DIP switch settings without consulting VUMII can impair the camera's function.

3.8 Changing the Camera IP Address

NOTES:

This section is not relevant when using the camera default IP address.

*The camera default IP address is:**192.168.0.100** .*

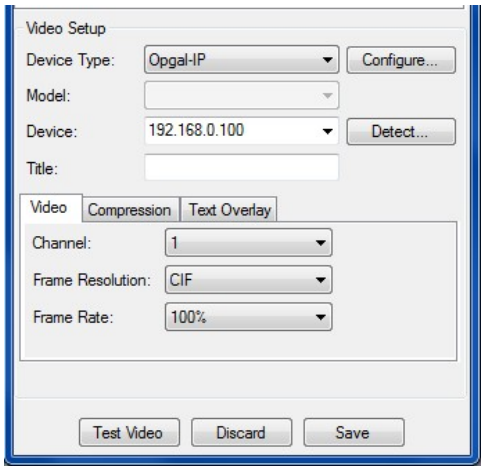
Use either of the following options to change the camera IP address:

- Changing IP Address using Sensorii (Section 3.8.1)
- Changing the Camera IP Address from a Web Browser (Section 3.8.2)

3.8.1 Changing IP Address using Sensorii

1. Verify that the wiring and current parameters allow communication with the camera.
2. Click the **Configure** button in the **Video Setup** section of the **Camera Setup** window (see Figure 3-35).

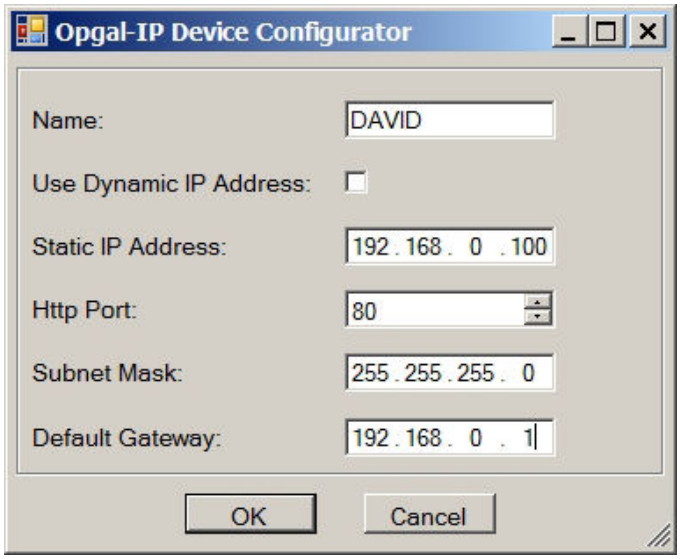
Figure 3-35: Video Setup Section with Configure Button



The **Opgal-IP Device Configurator** dialog box opens (see Figure 3-36).

3. Type the new IP address information in the relevant fields.
4. Click the **OK** button.

Figure 3-36: Opgal-IP Device Configurator Dialog Box



A dialog box opens, indicating a 30 second rebooting period of the communication device.

5. Click the **OK** button.

6. Verify that the new IP address appears in the **Control** section and the **Video Setup** section of the **Camera Setup** window.

3.8.2 Changing the Camera IP Address from a Web Browser

This section describes how to change the camera IP address through an internet browser and includes:

- Section 3.8.2.1: Logging in IP Camera
- Section 3.8.2.2: Changing the Camera IP Address
- Section 3.8.2.3: Rebooting the System
- Section 3.8.2.4: Changing the Camera Address in the Sensorii Camera Manager
- Section 3.8.2.5: Reconnecting to the Camera

3.8.2.1 Logging in IP Camera using Web Configurator

1. Verify that the camera is connected to the network through the RJ45 connector.
2. Verify that the camera is powered ON.
3. Open an internet web browser (Microsoft IE is recommended).

Type the current camera IP address in the browser navigation field and press the **Enter** key. The **Web Configurator** log in page opens (see Figure 3-37).

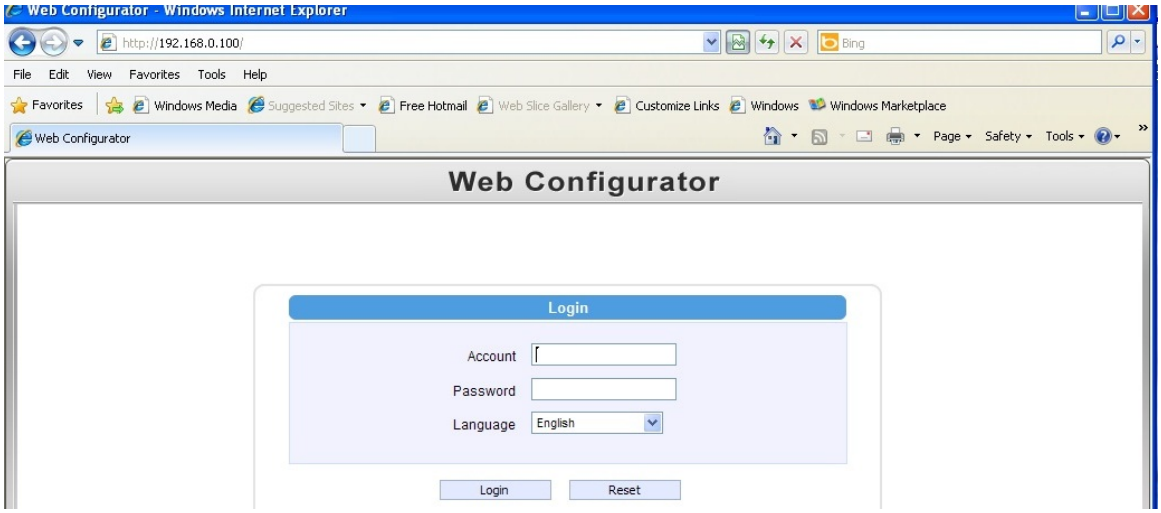
4. Type the account name and password and click the **Login** button. The default settings are:

- Account name: **admin**
- Password is: **123456**

NOTE

For security purposes, it is recommended to change the default username and password (Section 3.8.3: Changing IP Camera Username and Password3.9).

Figure 3-37: Web Configurator Login Screen



The **Web Configurator** opens (see Figure 3-38).

3.8.2.2 Changing the Camera IP Address

From the **Web Configurator workspace** (see Figure 3-38), perform

1. Select **Host** from the **Setup** menu.
2. Type the host name in the **Host Name** text box and the camera name in the **Camera Name** text box.
3. Click the **Apply** button in the **Host** section.

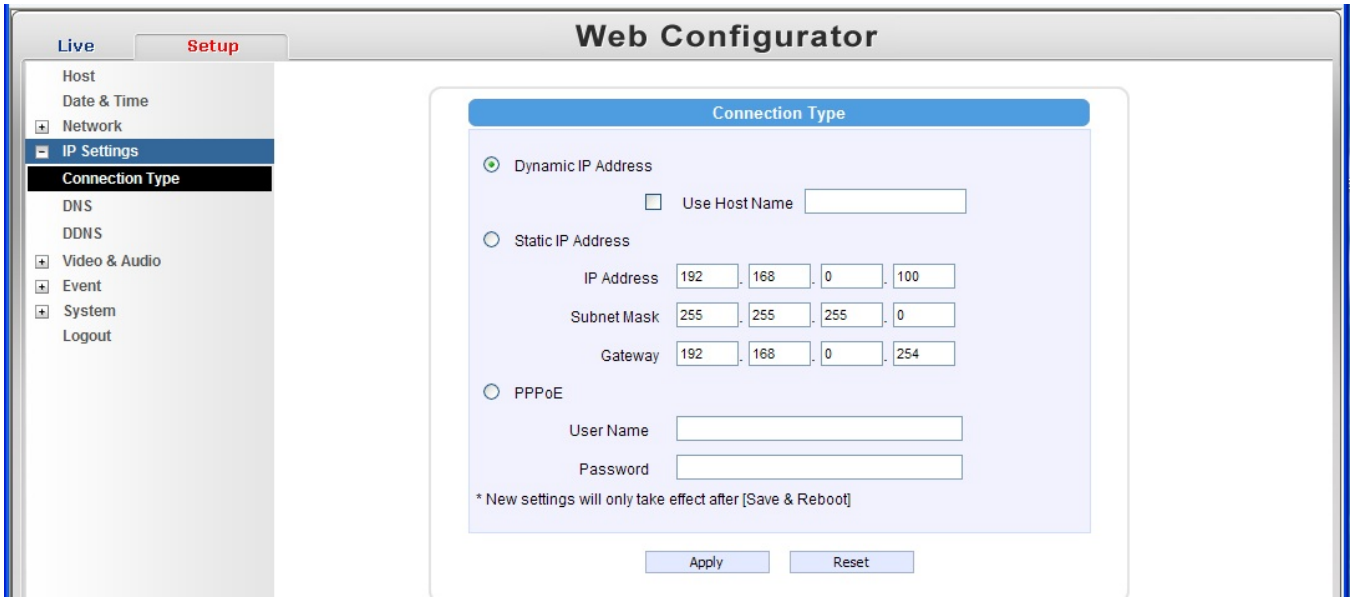
NOTE

*The **Apply** button saves settings for this session. Settings are saved to the camera memory after reboot of the system.*

Figure 3-38: Web Configurator Host Settings

4. Select **IP Settings** ➔ **Connection Type** from the **Setup** menu (see Figure 3-39).
5. Select the **Static IP Address** option button.
6. Type the new **IP address**, **Subnet Mask**, and **Gateway** as they appear in the GUI.
7. Click the **Apply** button.

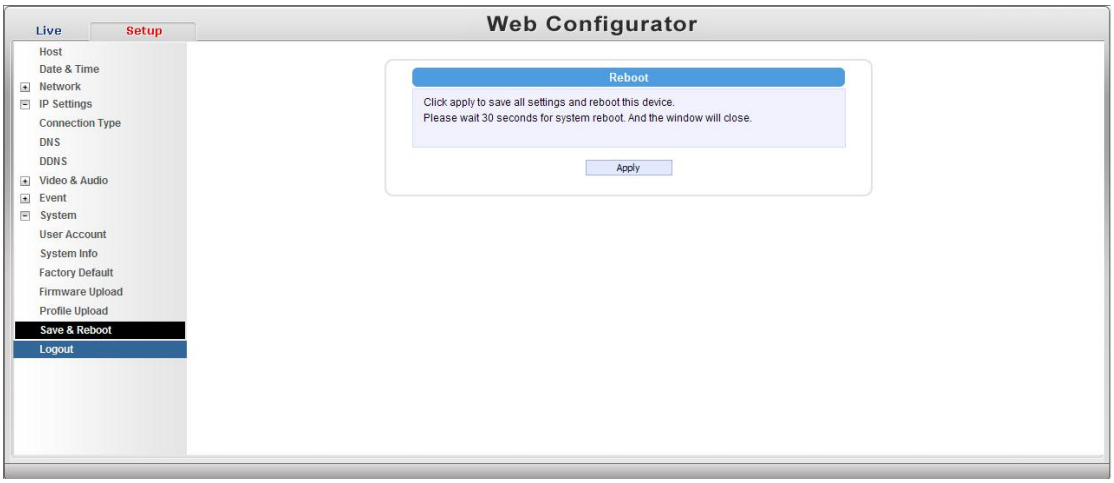
Figure 3-39: Web Configurator Connection Type Settings



3.8.2.3 Rebooting the System

1. Select **System** ➔ **Save & Reboot** ➔ from the **Setup** menu (see Figure 3-40).
2. Click the **Apply** button. The **Windows** dialog box opens (see Figure 3-41).

Figure 3-40: Web Configurator Save and Reboot



3. Click the **Yes** button. The **Web Configurator** page closes and the camera communication is restarted.

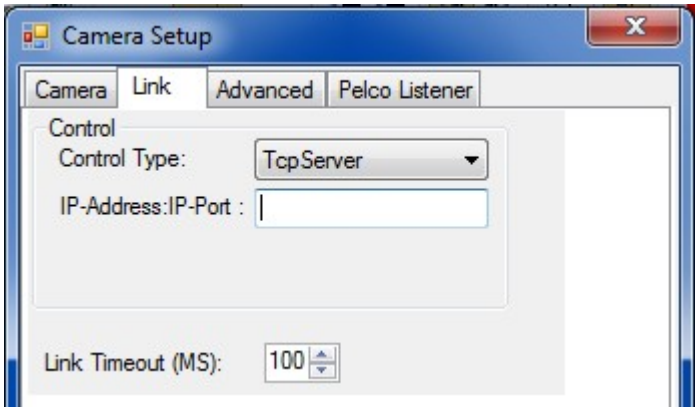
Figure 3-41: Web Configurator Save and Reboot Popup Warning

Windows Internet Explorer
The webpage you are viewing is trying to close the window.
Do you want to close this window?
Yes
No

3.8.2.4 Changing the Camera Address in the Sensorii Camera Manager

1. Open the **Camera Manager** in the Sensorii workspace (see section 3.4.1Starting the Camera Manager).
2. Select Sensorii from the **Camera Manager** window and click the **Edit** button. The **Camera Setup** window opens.
3. Select the **Link** tab and select **Tcp Server** from the **Control Type** option box.
4. Type the new IP address followed by the IP port number to which the camera is routed. (see Figure 3-42).
5. Click the **OK** button.

Figure 3-42: Link Tab-IP Communication Setup



3.8.2.5 Reconnecting to the Camera

1. Close the **Camera Manager** window.
2. Select the relevant camera from **Current System** option box.

3.9 Changing IP Camera Username and Password

An IP camera is shipped with the following credentials:

- Account name: **admin**
- Password is: **123456**

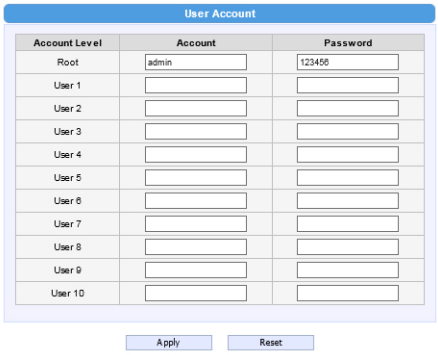
NOTE

For security purposes, it is recommended to change the default username and password.

To change the IP camera log in settings:

1. Perform Logging in IP Camera using Web Configurator
2. Select **System** > **User Account** from the **Web Configurator** left toolbar. The **User Account** screen is displayed with the current account settings (see Figure 3-43).

Figure 3-43: User Account Screen



3. Change the **Account** name and/or the **Password** and click the **Apply** button.
4. Select **System** > **Save & Reboot** from the **Web Configurator** left toolbar. The IP communication is terminated. Logging in must be done using the new account settings.

4. System Setup and Configuration

This chapter reviews tasks associated with configuration of the camera system. The tasks describes in this chapter are performed by the system administrator.

- Section 4.1: Home Position
- Section 4.2 Thermal Camera Configuration
- Section 4.3: Panorama Setup
- Section 4.4: Layout Setup
- Section 4.5: Aerial Map Setup
- Section 4.6: GPS Setup
- Section 4.7: Fire Detection Configuration
- Section 4.8: Pan Tilt Setup
- Section 4.9: Managing Presets
- Section 4.10: Managing Tours
- Section 4.11: Managing Tour using Accuracii Models
- Section 4.12: Virtual Serial Port Emulator
- Section 4.13: Service Taskbar
- Section 4.14: Camera Service Monitor
- Section 4.15: Logging Off

4.1 Home Position

Sensorii uses relative bearings that are related to a predefined reference point (home).

4.1.1 Home Position Setup

To define the homing position:

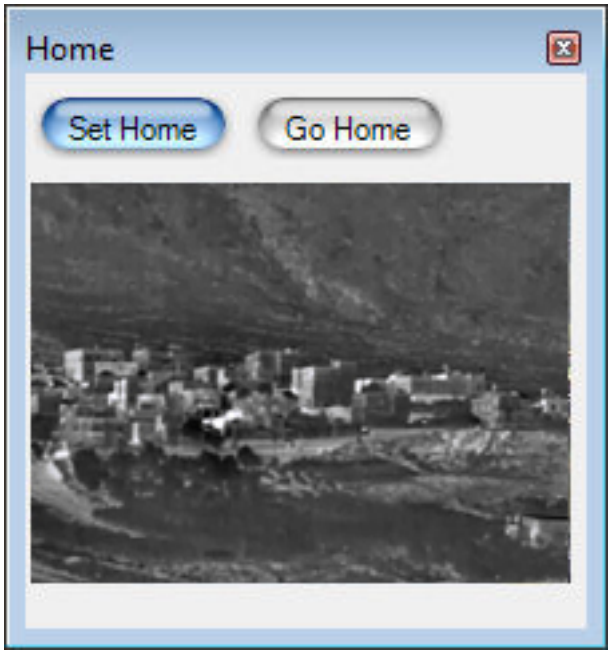
5. Position the homing object in the center of the camera's field of view (FOV).

TIP

Select an object that can also be recognized during darkness.

6. Perform Focus Adjustment (🗁Section 5.4.1).
7. Adjust the Zoom Control (🗁Section 5.5.2).
8. Select the **Setup Modules** > **Home** option from the Main Menu. The **Home** dialog box opens (see Figure 4-1).
9. Click the **Set Home** button. A snapshot of the camera FOV is displayed which helps in performing the Homing Verification procedure (🗁Section 4.1.2).

Figure 4-1: Home Dialog Box

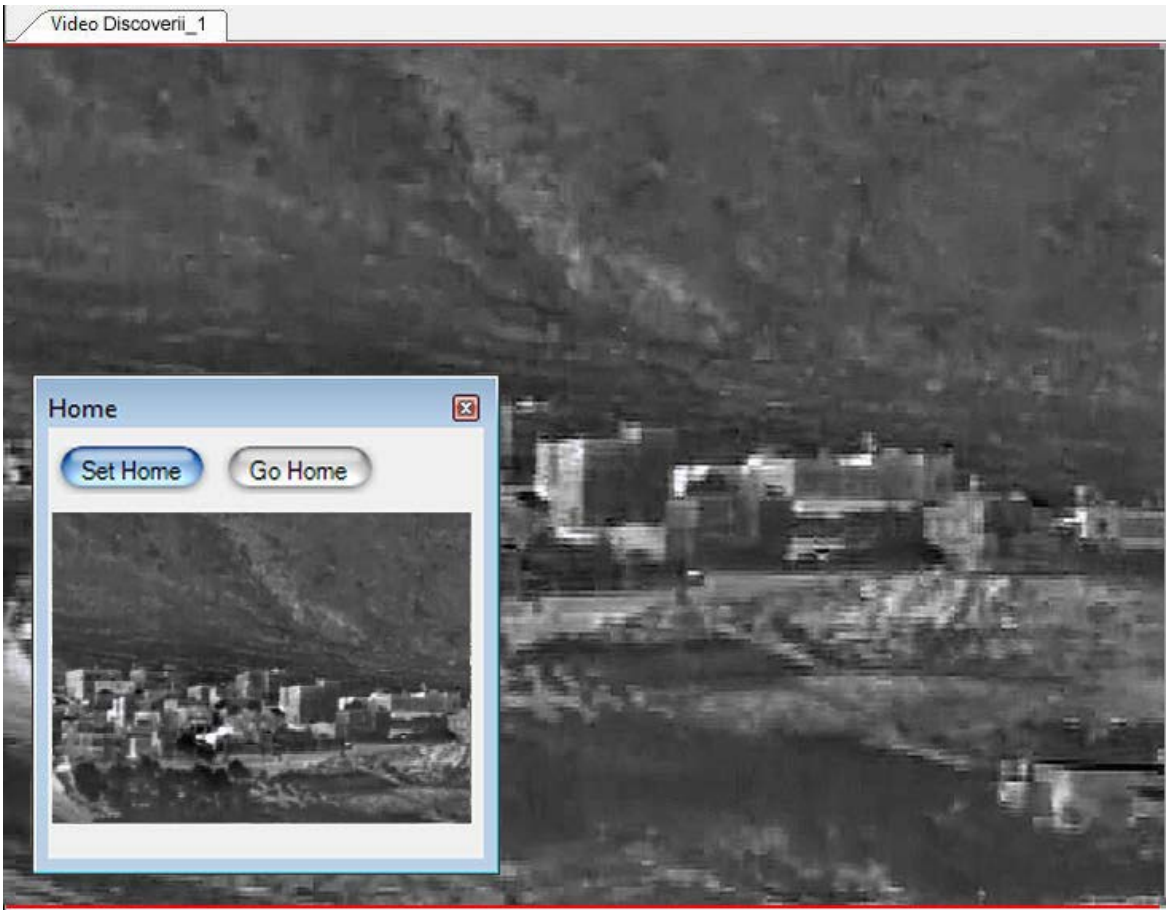


4.1.2 Homing Verification

To verify the calibration of the homing location:

1. Select **Setup Modules** > **Home** from the Main Menu. The **Home** dialog box opens (see Figure 4-1).
2. Click the **Go Home** button. Sensorii moves the Camera System to the predefined home position.
3. Verify that the reference home object positioned in the live video window is the same as in the **Home** dialog box snapshot (see Figure 4-2).
4. If necessary, correct the Camera System position to place the reference object identical to the reference snapshot on the **Home** dialog box and click the **Set Home** button.

Figure 4-2: Comparing Live Video with Reference Snapshot



4.2 Thermal Camera Configuration

This section reviews parameters associated with the thermal camera configuration.

NOTE

Each camera system has different features. The Thermal Configuration window changes according to the active system. Table 4-1 displays the availability of functions according to the selected camera system.

Table 4-1: Availability of Thermal Configuration Functions

Model/ Function	Flip Image (Section 4.2.2.1)	Pelco-D Camera Address (Section 4.2.2.2)	NUC Alert(Section 4.2.2.6)	NUC Display(Section 4.2.2.7)	NUC Interval(4.2.2.3)	NUC Auto Related Processes(Sec. 4.2.2.4)	NUC Mechanism (Section 4.2.2.5)	Average Image (Section4.2.2.8)	Baud Rate (Section 4.2.2.9)	Power Up Logo Display Time (Se. 4.2.2.10)	Gain Limit Mode (Section4.2.2.11)	Gain Limit Value (Section 4.2.2.12)	DRC Mode (Section 4.2.2.13)	Improved DRC Mode (Se. 4.2.2.14)	ROI (Section 4.2.2.15)	Video Format (Section 4.2.2.16)	Troubleshooting (Section 4.2.2.17)	System Version Information (Sec.4.2.2.18)	Update Version (Section 4.2.2.19)	Remote Power Control (Section 5.3.6)
Sii ML																				
64017u	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■		■	■	
64017u FD	■	■			■	■	■		■	■	■	■	■		■	■		■	■	
320 25u	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■	
Golan	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■	■
Accuracii ML																				
64017u	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■		■	■	
320 25u	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■	
Sii AT																				
320 25u	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■		■	■	
640 17u	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■		■	■	
Sii XR	■			■					■		■	■	■		■	■	■	■	■	

4.2.1 Opening the Thermal Configuration Window

To open the Thermal Configuration window:

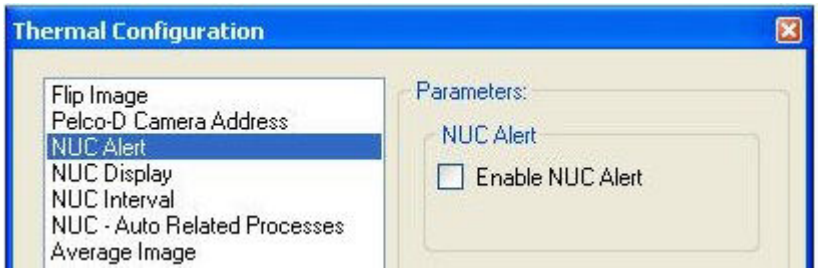
Select **Setup Modules** > **Thermal Configuration** from the main menu.

The **Thermal Configuration** window opens (see Figure 4-3).

NOTE

Each camera system has different features (see Table 4-1). The Thermal Configuration window changes according to the active system. The window in Figure 4-3 is of one particular system and is used for demonstration purposes only.

Figure 4-3: Thermal Configuration Window



4.2.2 Thermal Configuration Options

The following sections review the parameters that are controlled from the **Thermal Configuration** window.

NOTE

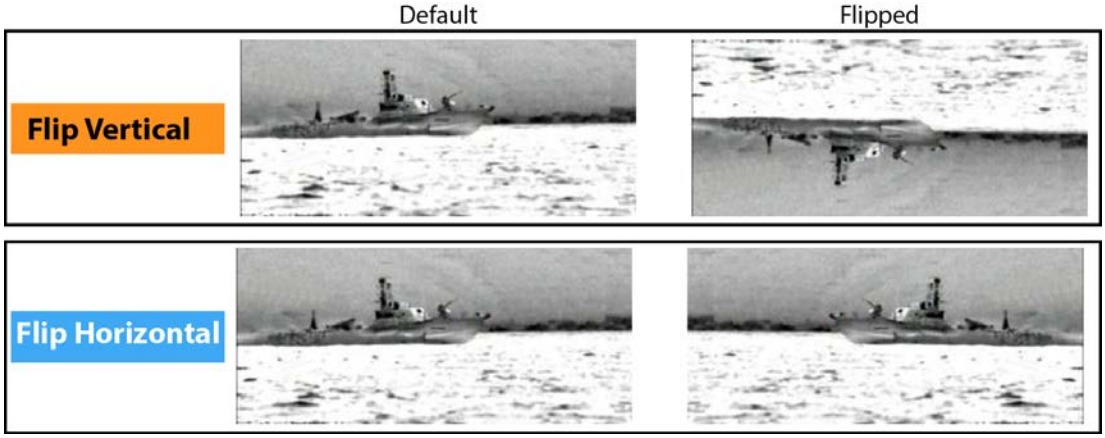
*To save parameters for the next startup, click the **Save Params to Flash** button. The **Set Command** button saves the parameter for the current session only.*

4.2.2.1 Flip Image

The image orientation can be set according to the installation's specific needs. The image can be displayed as viewed by the camera or flipped in either of the following orientations (see Figure 4-4):

- **Vertically** – the image is flipped around a vertical axis.
- **Horizontally** – the image is flipped around a horizontal axis.

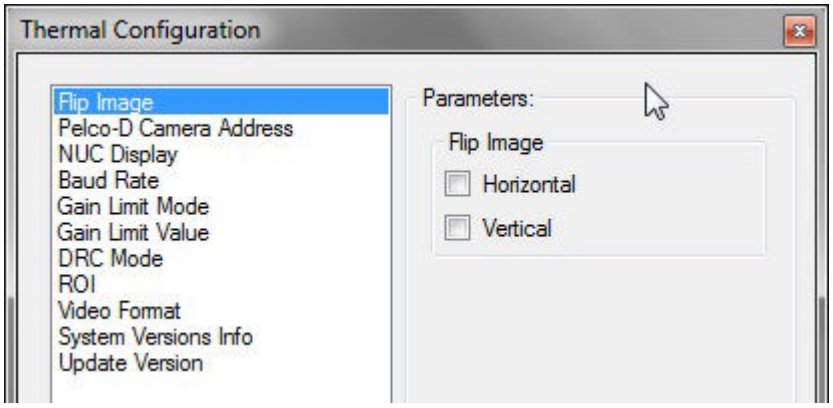
Figure 4-4: Flipped Images



To set the image orientation:

1. Select **Flip Image** from the **Thermal Configuration** parameter list.
2. Select the check box under **Parameters: Flip Image** or clear both check boxes so the image is displayed as in the camera view.
3. Click **Set Command**.

Figure 4-5: Flip Image



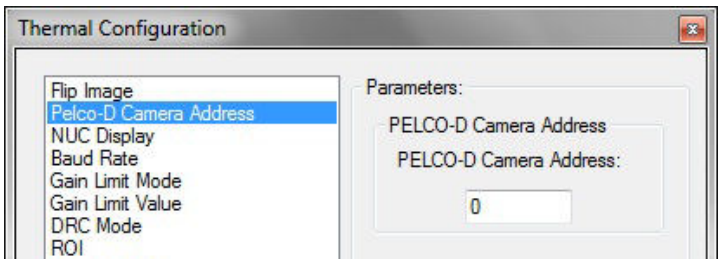
4.2.2.2 Pelco-D Camera Address

To operate the system using a Pelco-D control:

1. Select **Pelco-D Camera Address** from the **Thermal Configuration** parameter list.
2. Type the address in the **Pelco-D Cameral Address** text box. Entering a value of zero indicates that there is no Pelco-D device.
3. Click **Set Command** and **Save Params to Flash**.

4. Manually restart the camera by turning on and off the facility power switch.
5. Set the parameter in the **Camera Manager** to match the new address (see section 3.5.1 Pelco Listener Configuration).

Figure 4-6: Pelco-D Camera Address



4.2.2.3 NUC Interval

The NUC update can be performed automatically at set intervals.

To set the time interval between automatic NUC updates:

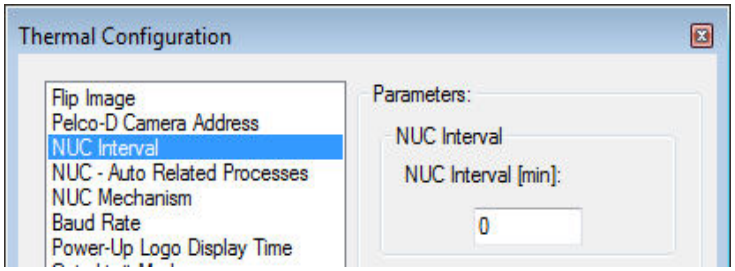
1. Select **NUC Interval** from the **Thermal Configuration** parameter list,.
2. Enter a value from 1 to 60 minutes in the **NUC Interval** text box. A value of zero disables the automatic NUC feature.

NOTE

Reducing the NUC interval below 30 minutes, may reduce system life and is not supported by the Vumii warranty.

3. Click **Set Command**.

Figure 4-7: NUC Interval

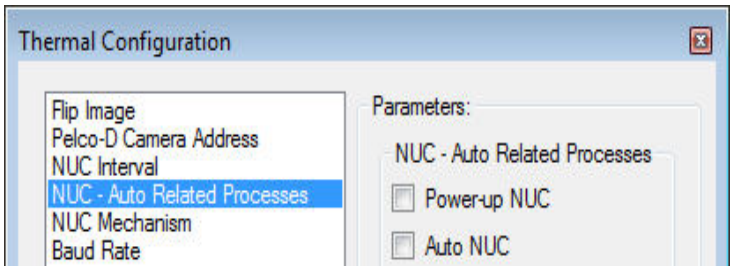


4.2.2.4 NUC Auto Related Processes

To enable automatic NUC updates:

1. Select **NUC Auto Related Processes** from the **Thermal Configuration** parameter list.
2. Check the **Power-up NUC** box to enable the NUC update after system start up.
3. Check the **Auto NUC** box to enable the NUC updates at timed intervals (Auto NUC default is 30 minutes).
4. Click **Set Command**. 0.

Figure 4-8: NUC Auto Related Processes



4.2.2.5 NUC Mechanism

The NUC update procedure is based on the camera viewing a uniform infrared scene. There are two methods used to create a uniform reference scene.

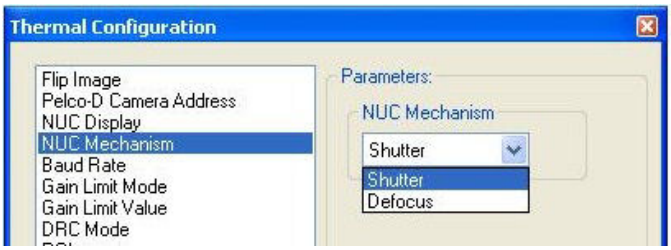
Shutter – An automated shutter blocks the engine detector view during the NUC update procedure. The shutter returns to open position at the end of the procedure.

De-focus – Used with a motorized lens, the system sets the camera lens to de-focus position during the NUC update while the shutter remains open.

To select the NUC Mechanism method:

1. Select **NUC Mechanism** from the **Thermal Configuration** parameter list,.
2. Select either **Shutter** or **Defocus** from the **NUC Display** option box.
3. Click **Set Command**.

Figure 4-9: NUC Mechanism



4.2.2.6 NUC Alert

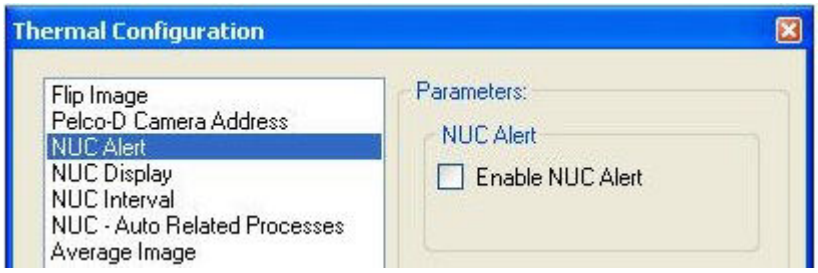
The next parameters are associated with the NUC update operation (🗁Section 4.4.1: NUC (Non-uniformity Correction)Update).

The system can send a warning signal to the operator before performing a NUC update.

To enable the NUC Alert:

1. Select **NUC Alert** from the **Thermal Configuration** parameter list.
2. Check the **Enable NUC Alert** box in the **Parameters** section.
3. Click **Set Command**.

Figure 4-10: NUC Alert



4.2.2.7 NUC Display

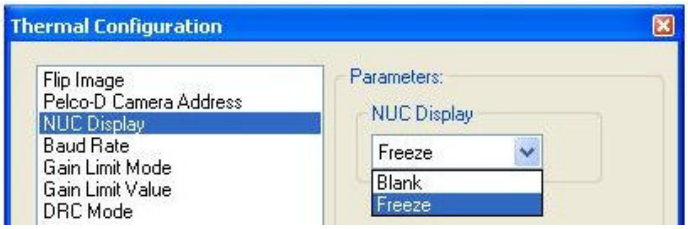
During the NUC update, the video is not updated. This parameter defines whether the image freezes or the screen goes blank during the NUC update.

1. Select **NUC Display** from the **Thermal Configuration** parameter list.
2. Select either of the following options from the NUC Display option box:

- Blank – the screen turns dark
- Freeze – the last image freezes on the screen.

3. Click **Set Command**.

Figure 4-11: NUC Display



4.2.2.8 Average Image

When the **Average Image** feature is enabled, the engine displays a processed value of a pixel that combines the current signal value with the history value of the corresponding pixel. Set the ratio between the current signal and the history value in order to help eliminate faulty targets that appear sporadically.

To set the *history* to *current* ratio in the **Average Image** feature:

1. Select **Average Image** from the **Thermal Configuration** parameter list.
2. Select a value from the **Average Image** option box
3. Click **Set Command**.

NOTE

Using the Average feature slows down the screen update rate and could lead to loss of real targets with low thermal profile.

Figure 4-12 Average Image

4.2.2.9 Baud Rate

Defines the communication baud rate with the camera. The camera system is supplied with a default baud rate setting. For the initial communication, the baud rate setting must be set for the camera default setting.

NOTE

After changing the baud rate in the Thermal Configuration window and restarting the camera, you must change the baud rate definition in the Camera Manger.

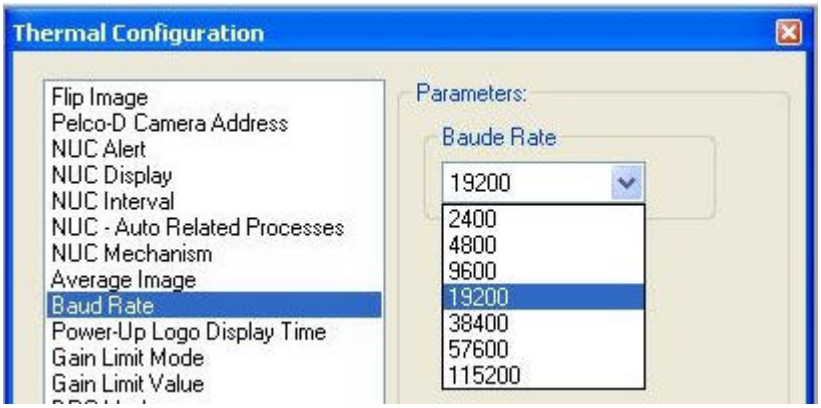
NOTE

Default baud rates of all Vumii camera models are found in chapter 8 Appendix C: Default Communication Settings.

To set and change the baud rate:

1. Select **Baud Rate** from the **Thermal Configuration** parameter list.
2. Select a value from the **Baud Rate** option box.
3. Click **Set Command** and **Save Params to Flash**.
4. Manually restart the camera by turning on and off the facility power switch.
5. Set the parameter in the **Camera Manager** to match the new one that was set in the **Thermal Configuration** window.

Figure 4-13: Baud Rate



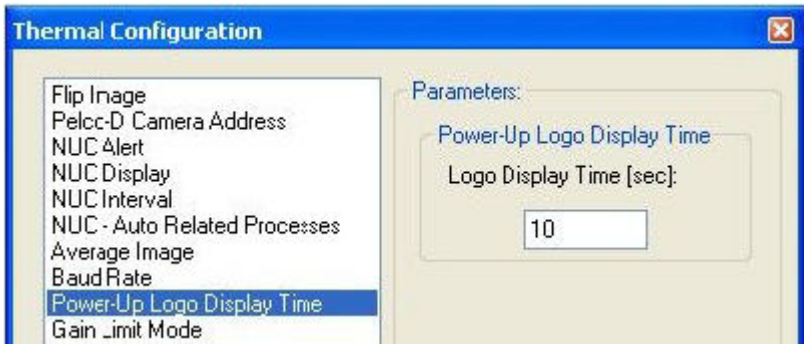
4.2.2.10 Power Up Logo Display Time

During the time it takes the camera engine to start up, a logo or other image can be displayed on the viewing screen.

To set the length of time that the logo is displayed at start up:

1. Select **Power-Up Logo Display Time** from the **Thermal Configuration** parameter list,.
2. Enter a value from 1 to 30 seconds in the **Logo Display Time** text box. A value of zero disables this feature.

Figure 4-14: Power Up Logo Display Time

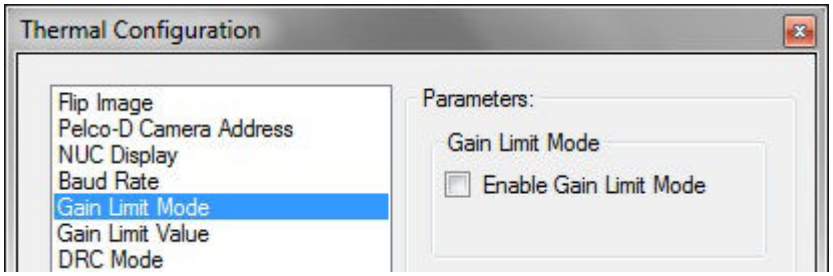


4.2.2.11 Gain Limit Mode

To enable the Gain Limit Mode:

1. Select **Gain Limit Mode** from the **Thermal Configuration** parameter list.
2. Select the **Enable Gain Limit Mode** box in the **Parameters** section.
3. Click **Set Command**.

Figure 4-15: Gain Limit Mode

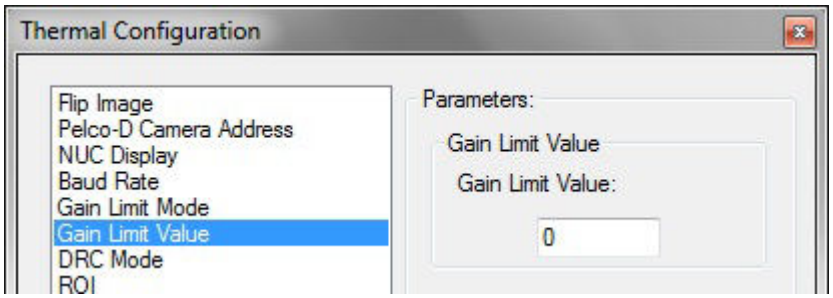


4.2.2.12 Gain Limit Value

To set the **Gain Limit** value:

1. Select **Gain Limit Value** from the **Thermal Configuration** parameter list,.
2. Enter the value in the **Gain Limit Value** text box.

Figure 4-16: Gain Limit Value



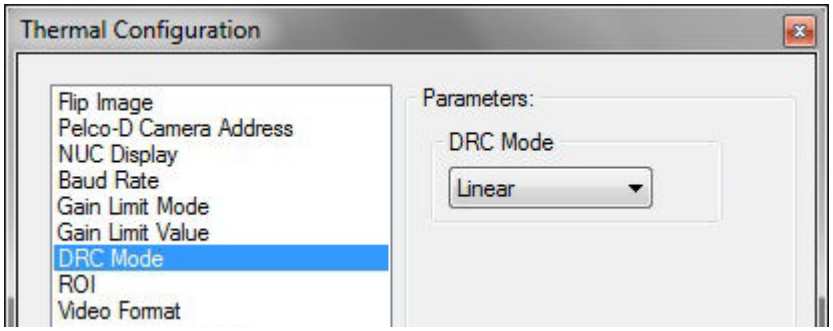
4.2.2.13 DRC Mode

This parameter sets the operational mode of the **Dynamic Range Compression** process.

To select the DRC mode:

1. Select **DRC Mode** from the **Thermal Configuration** parameter list.
2. Select the mode from the **DRC Mode** option box.
3. Click **Set Command**.

Figure 4-17: DRC Mode

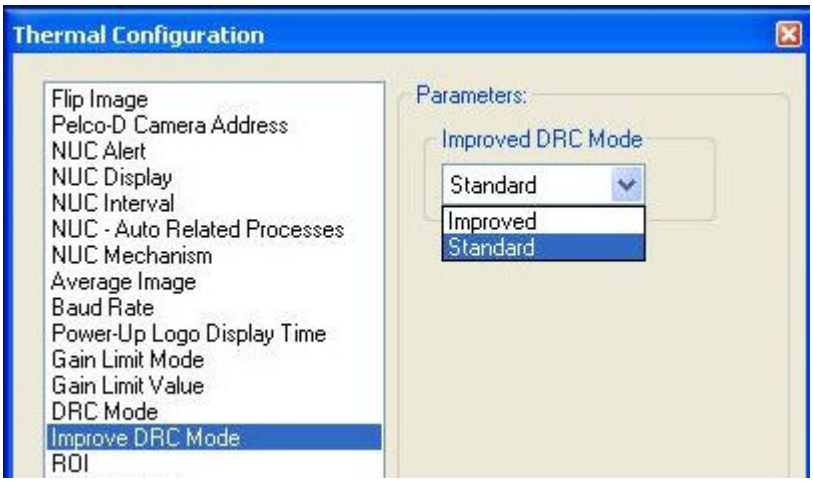


4.2.2.14 Improved DRC Mode

To select the DRC mode:

1. Select **Improved DRC Mode** from the **Thermal Configuration** parameter list.
2. Select either **Improved** or **Standard** from the **Improved DRC Mode** option box.
3. Click **Set Command**.

Figure 4-18: Improved DRC Mode



4.2.2.15 ROI (Region of Interest)

The Region of Interest (ROI) definition procedure defines the area of the FOV used during the image processing. There are three options for ROI:

- Full Screen

Two user defined areas:

- ROI1
- ROI2

TIP

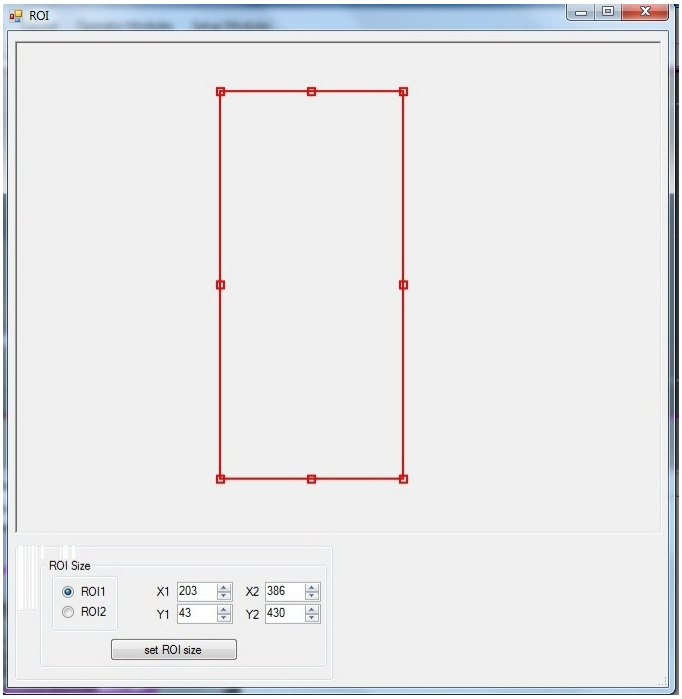
Use the user defined ROI when the engine site view includes an object (such as a light source, or a chimney) that should be ignored by the image processing procedure.

To define the ROI:

1. Select **ROI** from the **Thermal Configuration** parameter list. The **ROI** window opens (see Figure 4-19).
2. Select **ROI1** or **ROI2**.
3. Type the upper left corner coordinates, **X1**, **Y1** and the lower right coordinates **X2**, **Y2** in the appropriate boxes. A red box opens in the viewing window.
4. Adjust the size of the box by clicking and dragging the corners or the side of the box.
5. Adjust the position of the box by clicking in the middle of the box and dragging the box to the relevant location.

6. Click **set ROI size**

Figure 4-19: ROI (Region of Interest) Definition Window

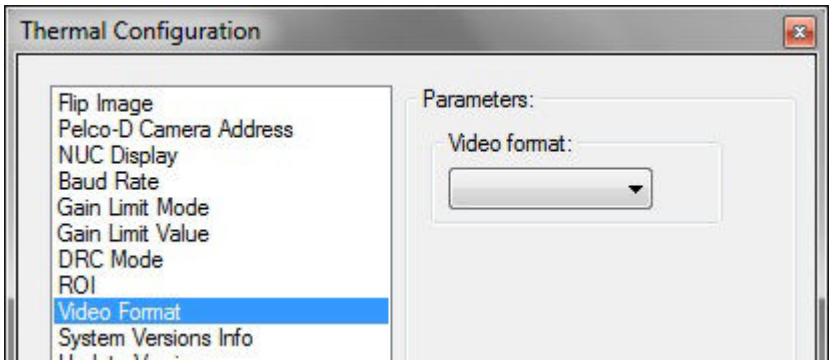


4.2.2.16 Video Format

To select the video format:

1. Select **Video Format** from the **Thermal Configuration** parameter list.
2. Select the video format from the **Video format** option box.
3. Click **Set Command** and **Save Params to Flash**.
4. Manually restart the camera by turning on and off the facility power switch.
5. Set the parameter in the **Camera Manager** to match the new one that was set in the **Thermal Configuration** window.

Figure 4-20: Video Format



4.2.2.17 Troubleshooting

This feature retrieves an internal system diagnostic which provides basic information about how the system is running.

NOTE

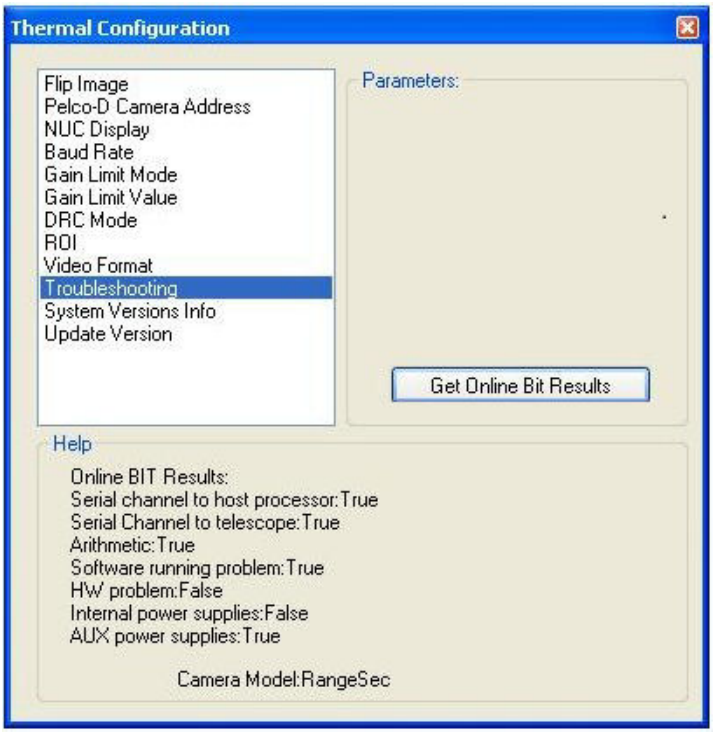
*The Troubleshooting feature is only available with the **RangeSec** system.*

To retrieve the troubleshooting diagnostic:

1. Select **Troubleshooting** from the **Thermal Configuration** parameter list,.
2. Click **Get Online Bit Results**.

The troubleshooting results are displayed in the **Help** section of the **Thermal Configuration** window.

Figure 4-21: Troubleshooting

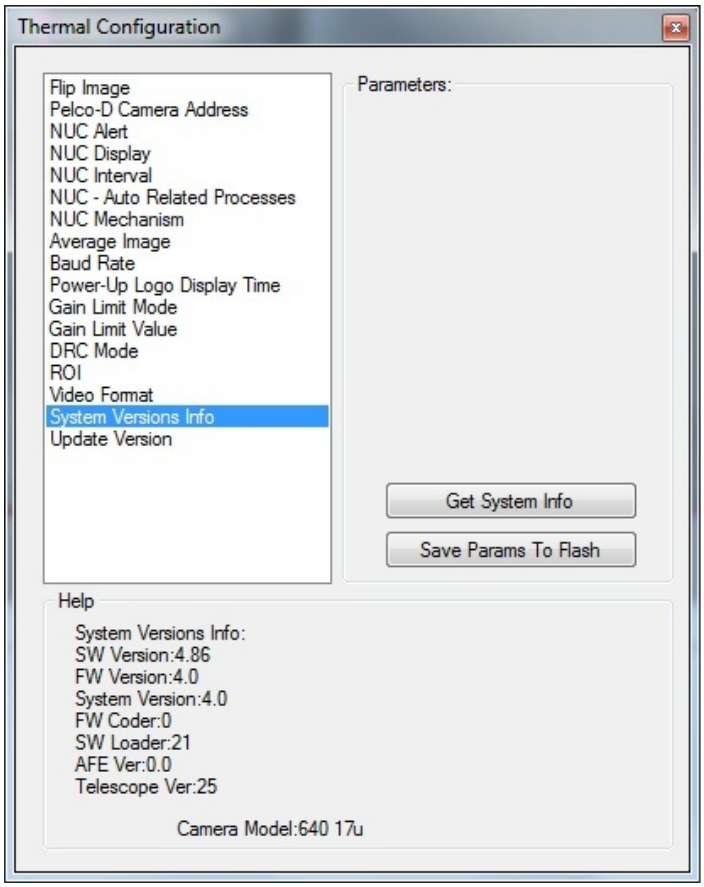


4.2.2.18 System Version Information

To see which version of the camera firmware is being used:

1. Select **System Version Information** from the **Thermal Configuration** parameter list.
2. Click **Get System Info**.

Figure 4-22: System Version Information

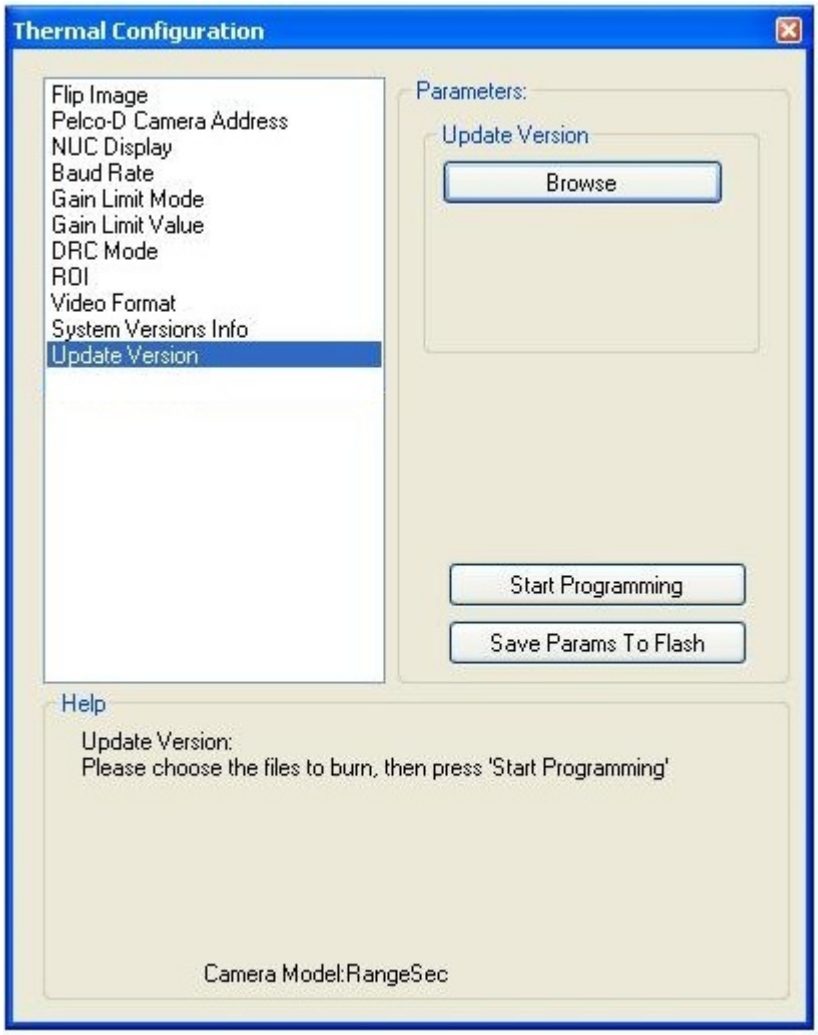


4.2.2.19 Update Version

To update the version of the camera firmware:

1. Select **Update Version** from the **Thermal Configuration** parameter list.
2. Click **Browse** and navigate to the new program file.
3. Select the file and click the **Open** button.
4. Click the **Start Programming** button.
5. Click **Set Command** and **Save Params to Flash**.
6. Manually restart the camera by turning on and off the facility power switch.

Figure 4-23: Update Version



4.3 Panorama Setup

This section reviews the tasks associated with placing a new image on the panorama window.

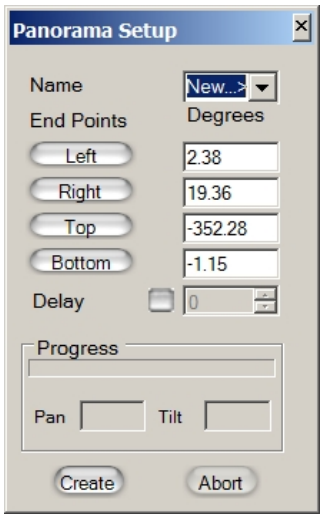
NOTE

Stop running a Preset Tours before defining a new panorama image (🗁Section 5.7).

To define the limits of a new panorama view:

1. Select **Setup Modules** > **Panorama Setup** from the Main Menu. The **Panorama Setup** dialog box opens (see Figure 4-24).
2. Type a new panorama name or select an existing name from the **Name** option box.
3. Move the camera to the upper left position of the panorama view.
4. Adjust the focus and the zoom used by the camera during the creation of the panoramic view.
5. Click the **Left** button and the **Top** button.
6. Move the camera to the lower right position of the panorama view.
7. Click the **Right** button and the **Bottom** button.
8. Click the **Create** button. The camera takes a set of photographs that covers the defined panoramic view. This process takes several minutes and is shown in the progress bar (see Figure 4-24). When the process ends, the panoramic view is displayed in the **Panorama** window.

Figure 4-24: Panorama Setup



NOTE

A new panorama should not be setup while the camera is building the previous panorama. An attempt to setup a new panorama during this time will result in losing the information from the current panorama process.

4.4 Layout Setup

Sensorii enables the customization of the operator workspace layout according to the type of Camera System and other parameters. Each window can be placed where it is most convenient.

NOTE

Sensorii includes workspace layout suitable for each Camera System. During normal operation there is no need to change the default workspace.

This section reviews setting up Sensorii work space layouts (🗁Section 2.4: Workspace) and includes the following:

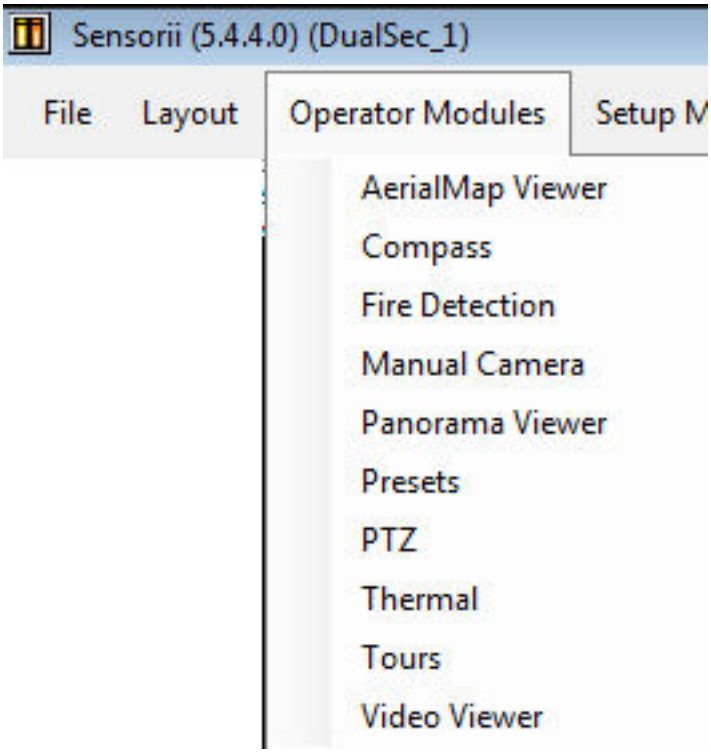
- Section 4.4.1: Adding a Window to the Workspace
- Section 4.4.2: Arranging the Workspace
- Section 4.4.3: Saving a New Layout
- Section 4.4.4: Editing a Layout
- Section 4.4.5: Loading a Layout

4.4.1 Adding a Window to the Workspace

To add a window to Sensorii workspace:

1. Select **Operator Modules** from the Main Menu. A list of all possible windows is displayed (see Figure 4-25).

Figure 4-25 Operator Modules Menu



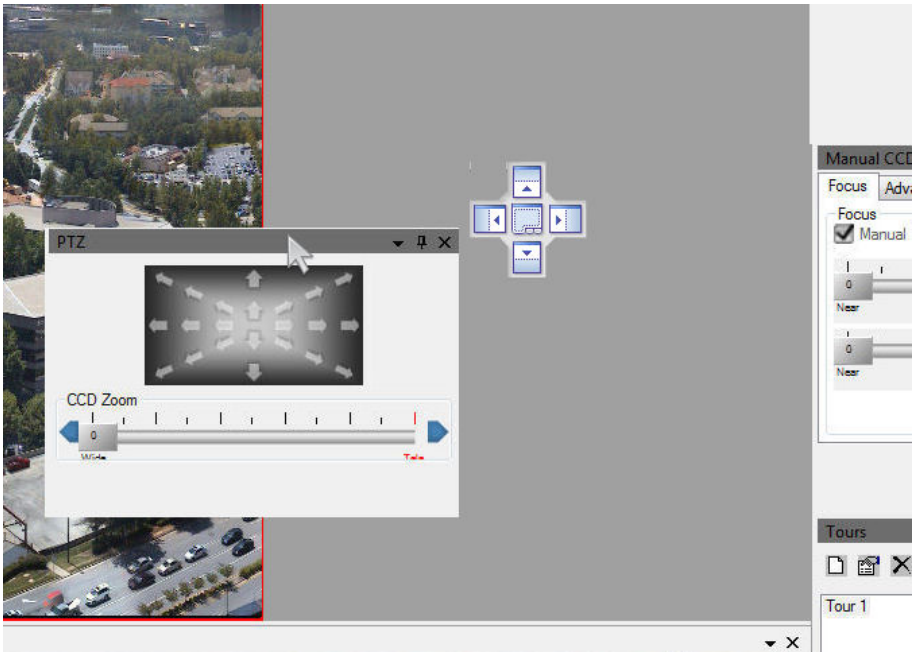
2. Select the relevant window. The selected window opens in Sensorii work space.

4.4.2 Arranging the Workspace

To arrange the windows in the workspace:

1. Perform the Adding a Window to the Workspace procedure to place the relevant windows in the workspace (Section 4.4.1).
2. Select **Layout** from the Main Menu and clear the **Lock Layout** option.
3. Drag the relevant window to the relevant location in the workspace. A shadow of the window moves with the cursor and docking arrows appear.
4. Drag the cursor onto one of the docking arrows and release. The window docks and becomes part of the workspace layout.

Figure 4-26 Docking a Window



TIP

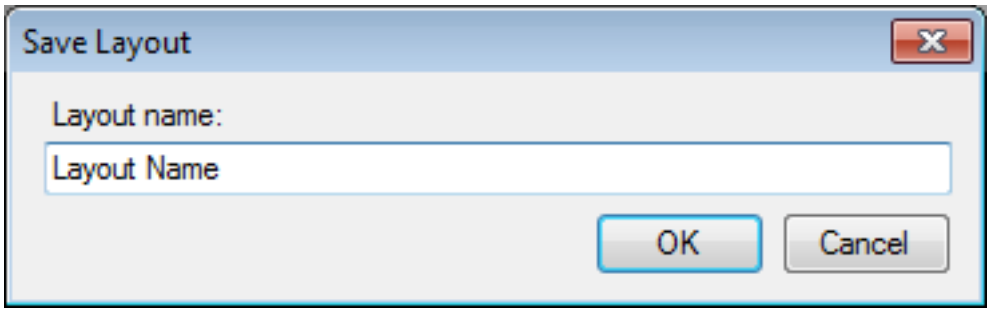
*Select the **Layout** > **Lock layout** option from the Main Menu To prevent movement of windows from their docked location.*

4.4.3 Saving a New Layout

To save the current layout arrangement for later use:

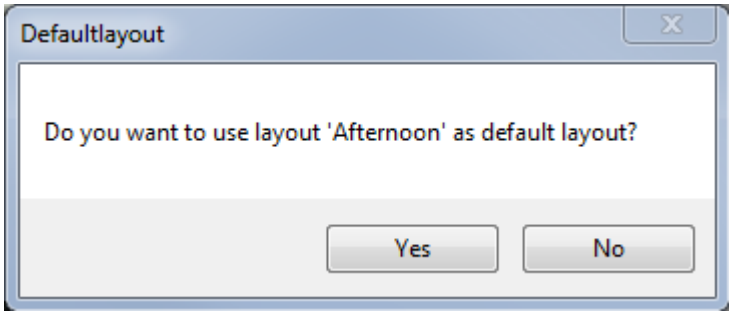
1. Select the **Layout** > **Save Layout as** option from the Main Menu. The **Save Layout** dialog box opens.
2. Type the new layout name and click the **OK** button.

Figure 4-27: Save Layout Dialog Box



3. The **Default Layout** message box opens. Click the **Yes** button to use the current layout as the default OR click the **No** button to save without using the current layout as the default. The current workspace layout is saved with the defined name and can be loaded at a later time.

Figure 4-28: Save Layout Dialog Box



4.4.4 Editing a Layout

To change an existing layout:

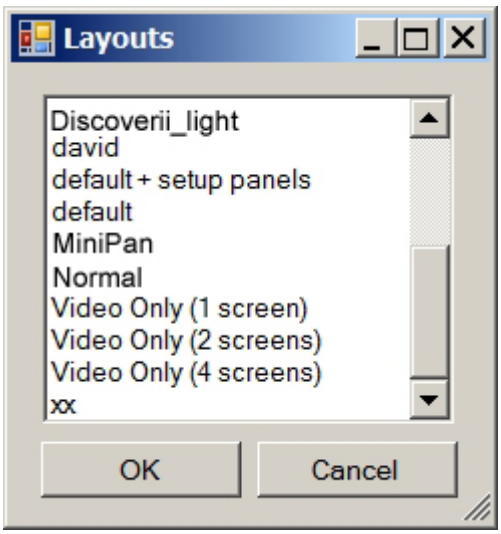
1. Rearrange the layout as desired.
2. Select **Layout** ➔ **Save Layout** from the Main Menu. The **Save layout?** Message box opens.
3. Click the **Yes** button. The relevant layout is saved with the changes.

4.4.5 Loading a Layout

To load a predefined layout:

1. Select **Layout** > **Load Layout** option from the Main Menu. The **Layouts** dialogue box opens (see Figure 4-29).
2. Select the relevant predefined layout and click the **OK** button. Sensorii workspace changes according to the selected layout.

Figure 4-29: Load Layout Dialog Box



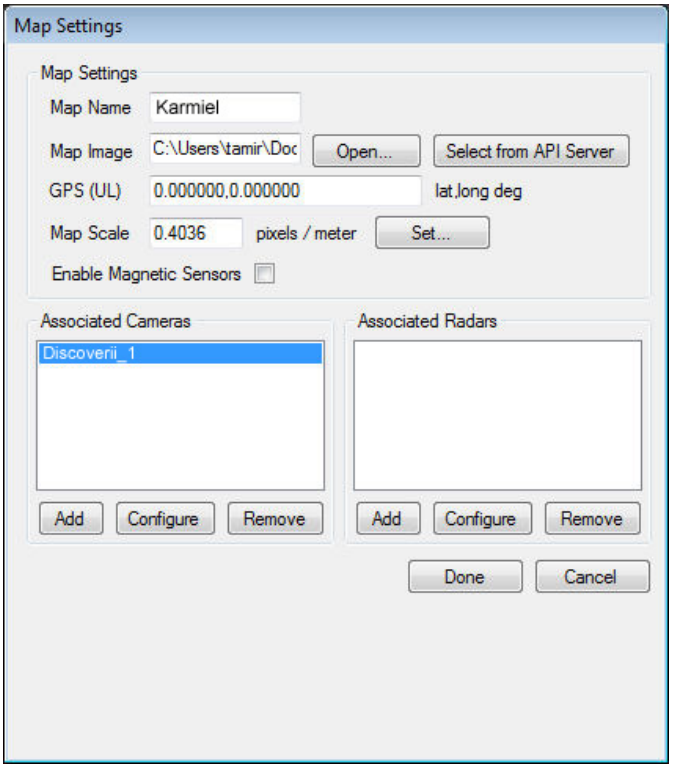
4.5 Aerial Map Setup

This section reviews the tasks associated with defining a map of the protected area.

4.5.1 Map Settings Startup

1. Select **Setup Modules** > **AerialMap Setup** from the Main Menu. The Map settings window opens (see Figure 4-30).

Figure 4-30: Map Settings Window



4.5.2 Map Selection

1. Type a description text in the **Map Name** text box.
2. Click the **Open** button and select the map image file.

TIP

*Click the **Select from API Server** button to select map files used in the past.*

4.5.3 Map Scaling

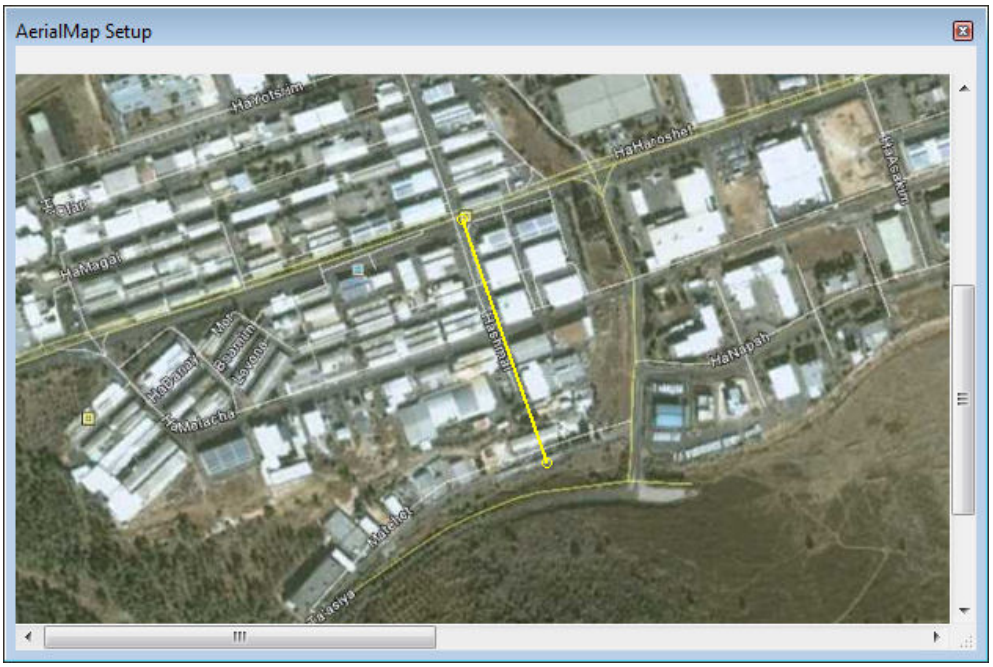
To define the number of pixels per one meter on the map:

1. Click the **Set** button. The **Aerial Map** dialog box opens (see Figure 4-31).
2. Click the start point of a line on a map with known distance.
3. Drag and click on the end of the line at the desired distance.

TIP

*When the scaling ratio is known, type the number of pixels per meter in the **Map Scale** text box.*

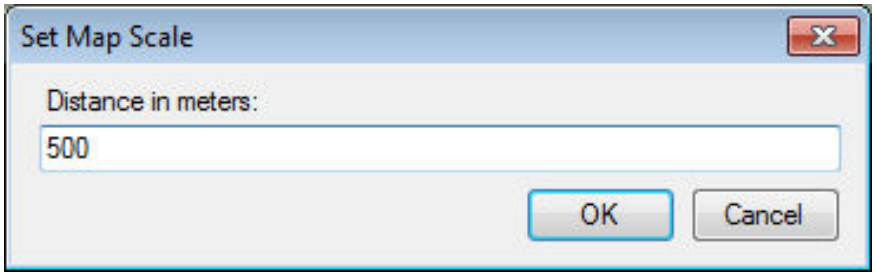
Figure 4-31: Known Distance Line Pointing



The **Set Map Scale** dialog box opens.

4. Type the distance (in meters) of the pointed line.
5. Click the **OK** button. Sensorii scales the new map.

Figure 4-32: Map Settings Window



4.5.4 Camera Assignment

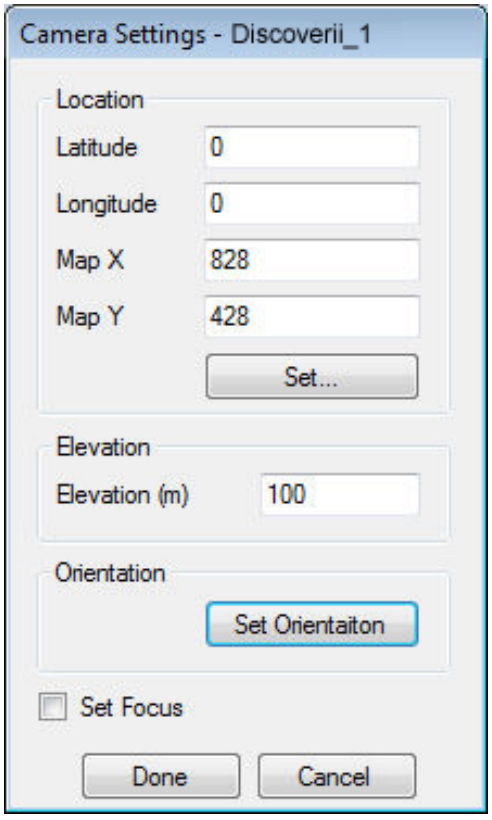
To set the map to a specific Camera System:

1. Click the **Add** button located on the **Associated Cameras** area.

The **Camera Settings** dialog box opens (see Figure 4-33).

2. Click the **Set** button located in the **Camera Settings** dialog box. The map image dialog box opens.
3. Click the map on the location where the Camera System is installed and close the window.
4. Type the height (in meters above sea level) of the Camera System in the **Elevation (m)** text box.

Figure 4-33: Camera Settings



5. Click the **Set Orientation** button. The map image dialog box opens displaying the Camera System location and markers indicating the Camera System direction (see Figure 4-34).

6. Draw the line and click the map image in the direction in which the camera is currently positioned.

7. Close the map image window.

Figure 4-34: Camera Orientation Setting

8. Click the **Done** button located in the **Camera Settings** dialog box (Figure 4-33).

9. Click the **Done** button located in the **Map Settings** Window (see Figure 4-30).

4.6 GPS Setup

This section reviews the tasks associated with the calibration of the Camera System with global positioning system (GPS) coordinates. This calibration is required for the Changing FOV using GPS procedure (🗁Section 5.6.5).

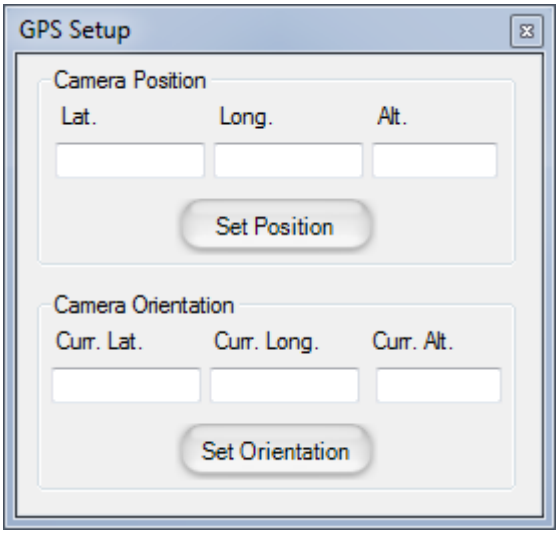
4.6.1 Defining Sensorii™ Position

1. Select the **Set Up Modules** > **GPS Setup** option from the Main Menu. The **GPS Setup** window opens (see Figure 4-35).
2. Type the GPS coordinates of the Camera System base position in the **Lat**. and in the **Long** text boxes.
3. Type the latitude of the Camera System base position in the **Alt** text box.
4. Click the **Set Position** button.

4.6.2 Defining Preset Position

1. Position Sensorii™ on a preset with known GPS coordinates and altitude.
2. Type the GPS coordinates of the preset displayed in the **Lat** and in the **Long** text boxes.
3. Type the latitude of the preset displayed in the **Alt** text box.
4. Click the **Set Orientation** button.

Figure 4-35: GPS Setup



4.7 Fire Detection Configuration

Fire detection and fire risk assessment performances are affected by the environment of the scanned area. The system is calibrated (default values) for use in an average environments.

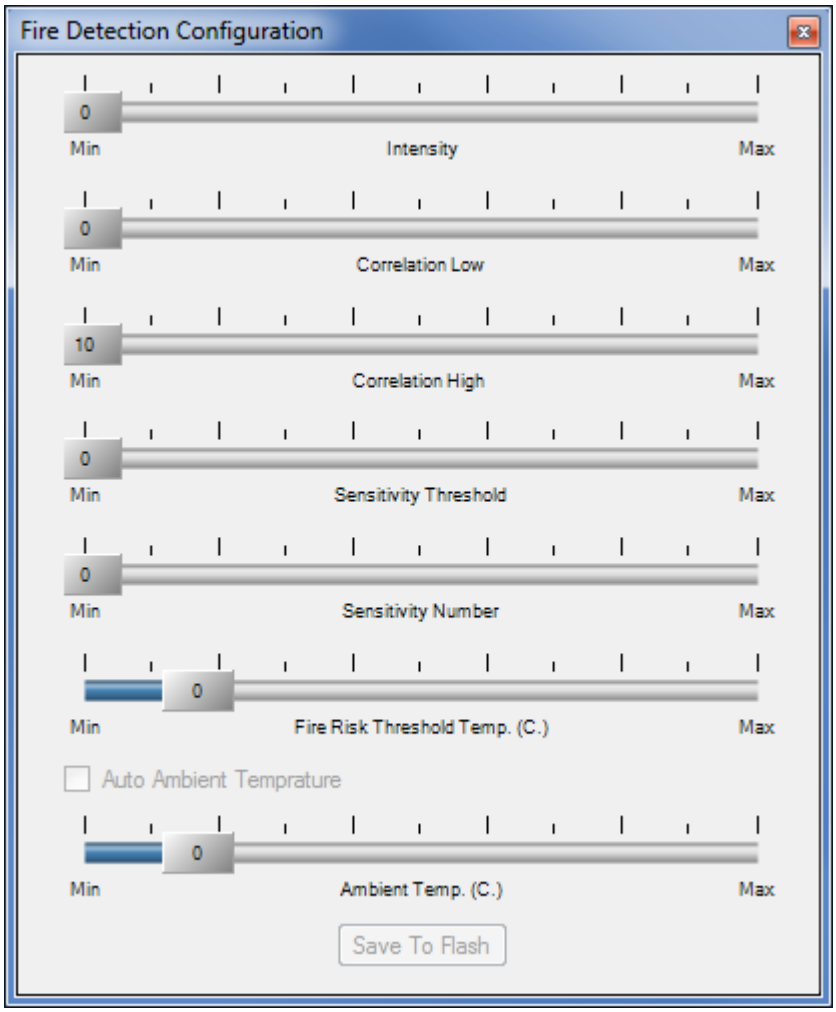
This section reviews the options to adjust the sensitivity of the fire detection and a risk assessment according to the client specific environment.

4.7.1 Setting the Fire Detection Parameters

To set the fire detection parameters:

1. Select **Setup Modules** > **Fire Detection Configuration** from the **Main Menu**. The **Fire Detection Configuration** window opens.

Figure 4-36: Fire Detection Configuration Window



4.7.2 Optional Configurations

NOTE

It is strongly recommended that the configuration parameters match one of the three zones described below. Settings other than these recommended parameters may result in poor performance of Flame Alerts and Risk of Fire Alerts

The fire detection configuration is adjusted according to the following zones (see Table 4-2):

- **Default** – suitable for forest areas, open scenes, and timber storage sites
- **Type 1 area** – suitable for typical industrial zones and urban areas
- **Type 2 area** –suitable for heavy industries, refineries, windy areas, and high volume of traffic.

2. Set the parameters according to the following table:

Table 4-2: Fire Detection Optional Configurations

				Effect of increasing parameter value		
Parameter Name	*Default*	*Type 1 area*	*Type 2 area*	*Detection time*	*Detection rate*	*False alarms*
Intensity	0	10	10	↓	↑	↑
Correlation Low	4	4	5-6	↑	↓	↓
Correlation High	16	16	14 to 15	↓	↑	↑
Sensitivity Threshold	70	135	140 to 145	↑	↓	↓
Sensitivity Number	34	50	65 to 70	↑	↓	↓
Fire Risk Threshold Temp (C)	50	55	60	Detection occurs above this value only		
Ambient Temp (C)	Auto	Auto	Auto			

NOTE

The detection of hot spots might vary in the vicinity of the defined thresholds due to changes in ambient weather conditions.

4.8 Pan Tilt Setup

This section reviews tasks associated with the PT unit.

4.8.1 Starting Pan Tilt Setup

To start the pan and tilt setup:

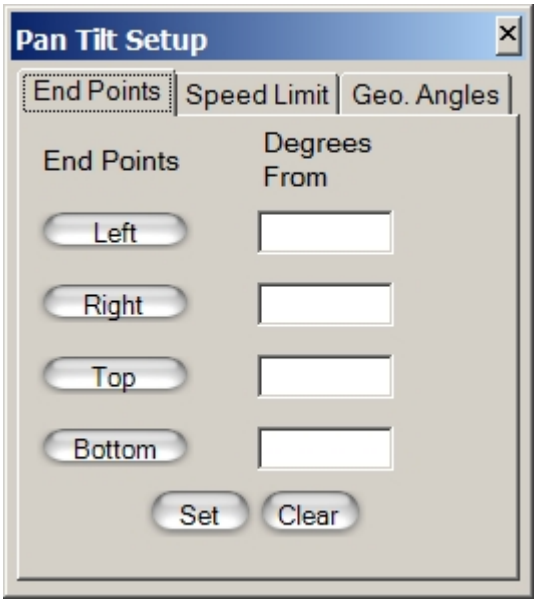
1. Select the **Setup Modules** > **Pan Tilt Setup** option from the Main Menu. The **Pan Tilt Setup** dialog box opens (see Figure 4-37).
2. Select the relevant tab.

4.8.2 Pan Tilt Limits

This section contains instructions for defining the movement limits of the PT unit (optional).

1. Perform the Starting Pan Tilt Setup procedure (Section 4.8.1). The **Pan Tilt Setup** window opens (see Figure 4-37).
2. Select the **End Points** tab.
3. Position the camera on the upper left corner of the relevant scanning area.
4. Click the **Top** and **Left** buttons. The PT unit current coordinates are displayed as the top and left limits.
5. Position the camera on the lower right corner of the relevant scanning area.
6. Click the **Bottom** and the **Right** buttons. The PT unit current coordinates are displayed as the bottom and right limits.
7. Click the Set button. Sensorii saves the limit settings for the current Camera System.

Figure 4-37: Pan Tilt Setup – End Points

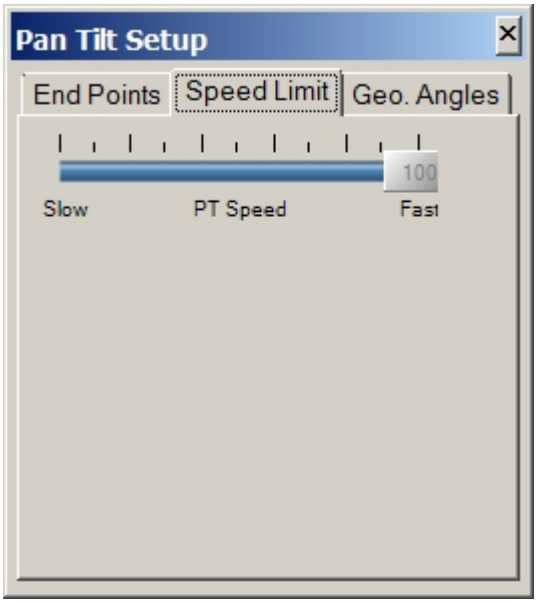


4.8.3 Speed Limit

Use the scroll bar in the **Speed Limit** tab to reduce the PT unit maximum travel speed.

1. Perform the Starting Pan Tilt Setup procedure (🗁Section 4.8.1). The **Pan Tilt setup** window opens (see Figure 4-37).
2. Select the **Speed Limit** tab (see Figure 4-38).
3. Perform Scroll Bar Adjustment to set the relevant speed limit (0-100%).

Figure 4-38: Pan Tilt Setup – Speed Limit

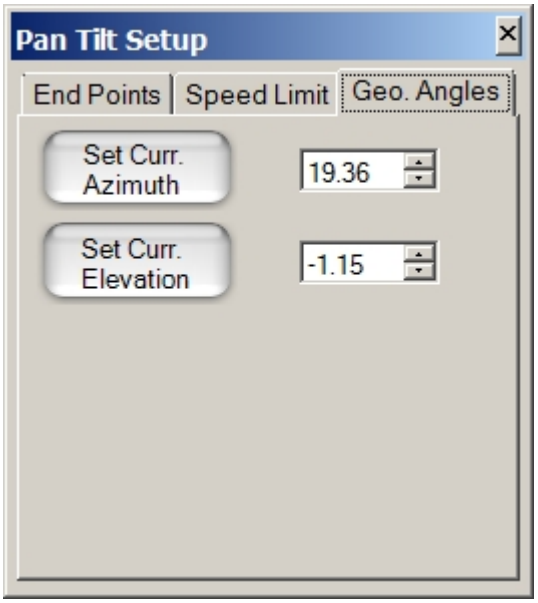


4.8.4 Calibrating True Elevation and Bearings

To calibrate the Camera System relative pan and tilt with true bearings and elevation related to the horizon.

1. Place the reference object in the center of the camera's FOV.
2. Set the **Set Curr. Azimuth** spin box to the true bearing of the line of sight between the Camera System and the reference object.
3. Click the **Set Curr. Azimuth** button.
4. Set the **Set Curr. Elevation** spin box to the elevation related to the horizon of the bore sight between the Camera System base and the object.
5. Click the **Set Curr. Elevation** button.

Figure 4-39: Pan Tilt Setup – Geo. Angles Tab

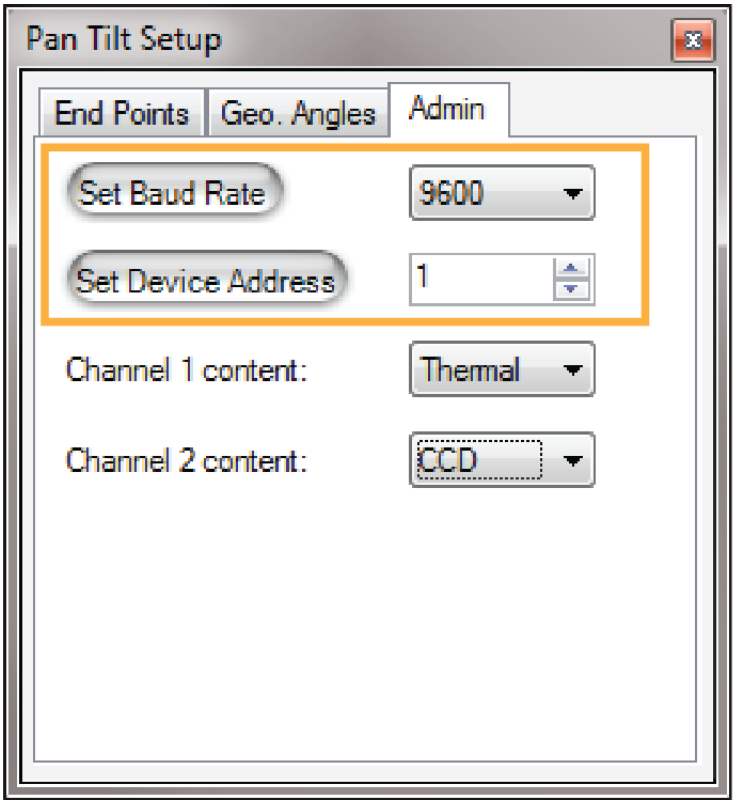


4.8.5 Changing Accuracii Communication Settings

To change the Accuracii current communication settings:

1. Select the **Setup Modules** > **Pan Tilt Setup** option from the Main Menu. The **Pan Tilt Setup** dialog box opens (see Figure 4-40).
2. Select the **Admin** tab.
3. Accuracii changes its baud rate and communication with the system is lost.
4. SHOULD THIS BE REMOVED
5. Change the baud rate on the Link Settings (see Section 3.4.4.1 which is part of Defining a Camera System (section 3.4).

Figure 4-40: Pan Tilt Setup – AdminTab



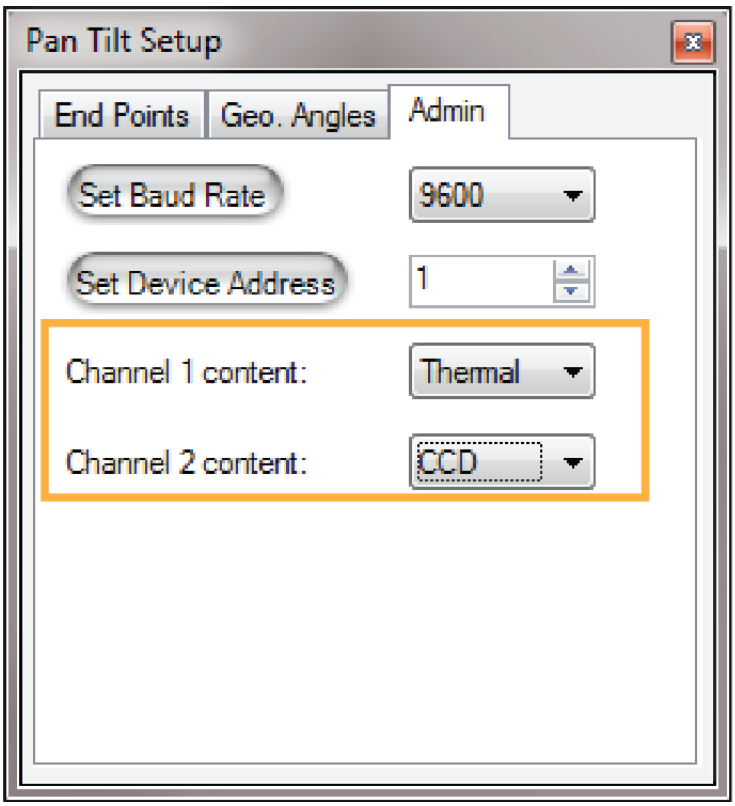
4.8.6 Changing Accuracii Video Channels Settings

Accuracii has two video channels (channel #1, and channel #2). Accuracii can transmit on each of the channels video from the CCD camera or video from the thermal camera.

To change the Accuracii current video channels settings:

1. Select the **Setup Modules** > **Pan Tilt Setup** option from the Main Menu. The **Pan Tilt Setup** dialog box opens (see Figure 4-41).
2. Select the **Admin** tab.
3. SHOULD THIS BE REMOVED?

Figure 4-41: Pan Tilt Setup – Admin Tab



4.9 Managing Presets

This section reviews the tasks associated with creating and managing presets and includes:

- Section 4.9.1: Focusing on an Object
- Section 4.9.2: Creating a New Preset
- Section 4.9.3: Editing a Preset
- Section 4.9.4: Removing a Preset
- Section 4.9.5: Changing the Order of the Presets

NOTE

*If the **Presets Editor** window (see Figure 5-10) is not open, select **Setup Modules** > **Presets Editor** from the Main Menu.*

4.9.1 Focusing on an Object

1. Select the relevant operation mode from the Day/Night button located on the Upper Toolbar .
2. Place the target object in the center of the camera field of view (FOV).
3. Adjust the camera's zoom (🗁Section 5.5.2: Zoom Control).
4. Adjust the camera's focus (🗁Section 5.4.1: Focus Adjustment).
5. Adjust the camera's intensity (🗁Section 5.4.2: Exposure Adjustment)

4.9.2 Creating a New Preset

1. Click the **Create New Preset** button located on the **Presets Editor** window toolbar. The **Preset Properties** window opens (see Figure 4-42).
2. Type the name of the preset in the **Title** text box. This name appears on the presets list.
3. Type a description of the preset in the **Description** text box.
4. Set the relevant delay time on the **Visit Time** text box. This parameter defines the time the camera remains on the preset during a scan program before moving on to the next preset (🗁5.7: Preset Tours).

NOTE

When using Fire Detection, the delay time should be at least 10 seconds.

5. Select from the following check boxes to record these parameters in the preset's properties:

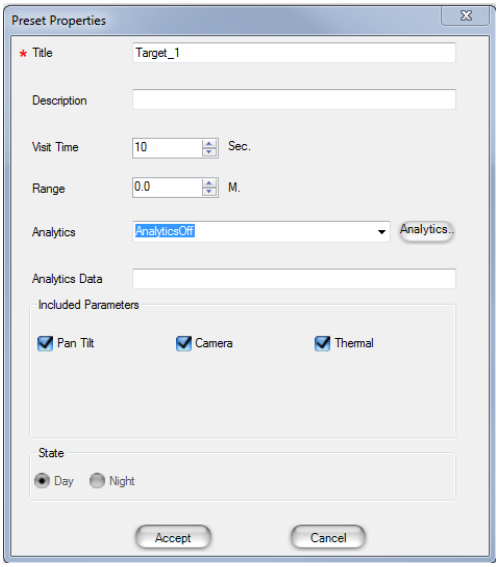
- **Pan Tilt** –current azimuth and tilt
- **Camera** –current Zoom Control (🗁Section 5.5.2) and the Exposure and Focus Adjustment settings (🗁Section 1).
- **Thermal** –the Thermal Camera Configuration settings (🗁 Section 4.2) and the Fire Detection Configuration settings (🗁 Section 4.7).
- **Illum** – (relevant for Discoverii) the current zoom and focus settings of the laser beam.

A preset may contain different sets of camera parameters for day and night uses. The day and night state are defined by the Day/Night button located on the Upper Toolbar (🗁Section 5.2: Day/Night Mode Selection) The following options indicate the current state:

- **Day** – the camera is set to the parameters saved in Day state.
- **Night** – the camera is set to the parameters saved in Night state.

6. Click the **Accept** button. The new preset appears on the preset list.

Figure 4-42: Preset Properties Window



4.9.3 Editing a Preset

To change the properties of an existing preset:

1. To change the preset camera parameters perform the Focusing on procedure (🗁Section 4.9.1).

2. Click the **Edit selected preset** button located on the **Presets Editor** window toolbar. The **Point to Preset** dialog box opens (see Figure 4-43).

3. Click on one of the following buttons:

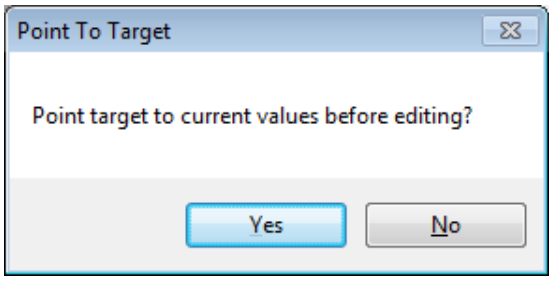
- **Yes** – sets the camera position and parameters according to the current settings of the selected preset.

NOTE

*Clicking the **Yes** button, overrides existing preset parameters with the current camera position and parameters.*

- **No** – maintains the camera in its current position and parameters as set in step 1 above.

Figure 4-43: Point to Preset Dialog Box



The **Preset Properties** window opens (see Figure 4-42).

4. Edit the relevant preset properties and click the **Accept** button (🗁Section 4.9.2: Creating a New Preset).

4.9.4 Removing a Preset

To delete an existing preset:

1. Select the relevant preset.

2. Click the **Delete selected preset** button located on the **Presets Editor** window toolbar.

TIP

You can select multiple presets (holding the Shift key) and remove all selected presets at one time.

4.9.5 Changing the Order of the Presets

To change the order of the presets on the list:

1. Select the preset you want to move.
2. Use the arrow buttons located on the **Presets Editor** window toolbar to move the selected preset up or down the presets list.

TIP

You can select multiple presets (holding the Shift key) and move all selected presets at one time.

4.10 Managing Tours

This section reviews the tasks associated with creating and maintaining a programmed scan, called a tour. A tour consists of a selection of predefined presets.

This section includes:

- Section 4.10.1:Creating a Tour
- Section 4.10.2: Editing a Tour
- Section 4.10.3: Removing a Tour

NOTE

When using Accuracii system, refer to Section 4.11: Managing Tour using Accuracii Models.

4.10.1 Creating a Tour

Perform the following tasks to create a new tour:

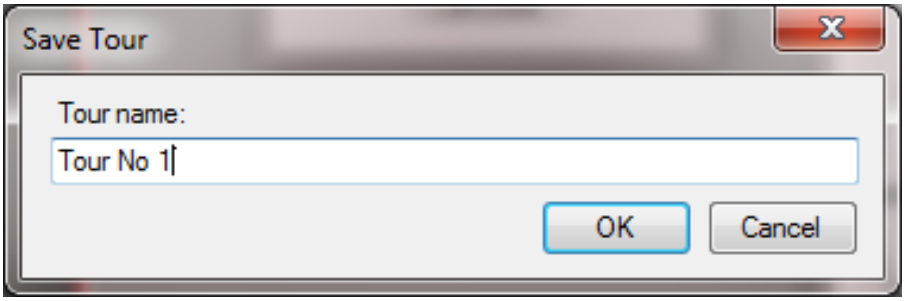
4.10.1.1 Defining Tour Name

NOTE

*If the **Tours Editor** window (see Figure 5-10) is not open, select **Setup Modules** > **Tours Editor** from the Main Menu.*

1. Click the **Create New Tour** button located on the **Tours Editor** window toolbar. The **Save Tour** dialog box opens (see Figure 4-44).
2. Type the name of the new tour and click the **OK** button.

Figure 4-44: New Tour Name



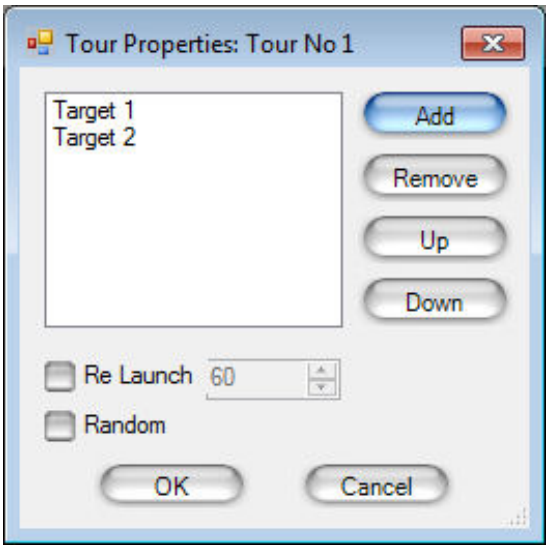
The **Tour Properties** dialog box opens (see Figure 4-45).

4.10.1.2 Tour Properties

To set the tour properties:

1. Click the **Add** button located on **Tour Properties** toolbar (see Figure 4-45) and perform the Adding Presets to the Tour task (🗁section 4.10.1.3).
2. Repeat step 1 to add additional presets to the tour.
3. To delete a preset from the current tour, select the relevant preset and click the **Remove** button.
4. To change the order of the presets, select the relevant preset and use the **Up** or **Down** buttons to move the selected preset up or down the presets list.
5. Select the **Re Launch** checkbox to enable continued tour scanning after a scan was interrupted by manual action. Set the delay time required before the system continues running the tour.
6. Select the **Random** checkbox to let Sensorii randomly set the order of presets during the tour scan.
7. Click the **OK** button to close the **Tour Properties** dialog box.

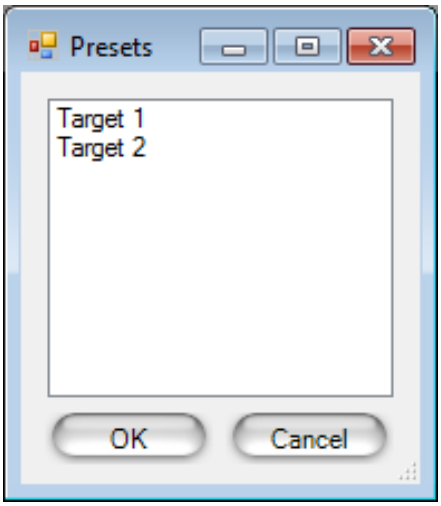
Figure 4-45: Tour Properties



4.10.1.3 Adding Presets to the Tour

1. Click the **Add** button located on the **Tour Properties** window toolbar (see Figure 4-45). The **Presets** dialog box opens displaying all predefined targets (🗁Section 4.9: Managing Presets).
2. Select the relevant target and click the **OK** button. The **Targets** dialog box closes and the selected target is added to the **Tour Properties** list of targets.

Figure 4-46: Tour Properties – Target List



4.10.2 Editing a Tour

To change properties of an existing tour:

1. Click the edit selected tour button located on the **Tours Editor** window toolbar. The **Tour Properties** dialog box opens (see Figure 4-45).
2. Edit the relevant parameters in the Tour Properties dialog box (🗁Section 4.10.1.2).
3. Click the **OK** button.

4.10.3 Removing a Tour

To delete an existing tour:

1. Select the relevant tour.
2. Click the **Delete selected tour** button located on the **Tours Editor** window toolbar. The selected tour is removed from the list.

4.11 Managing Tour using Accuracii Models

NOTE

This section is relevant only to Accuracii models. When using model other than Accuracii, refer to Section 4.10: Managing Tours.

This section reviews the tasks associated with creating and maintaining a programmed scan, called a tour using Accuracii models. A tour consists of a series of predefined presets. The tour runs all the defined presets. The order of the presets in the tour is defined by the preset number.

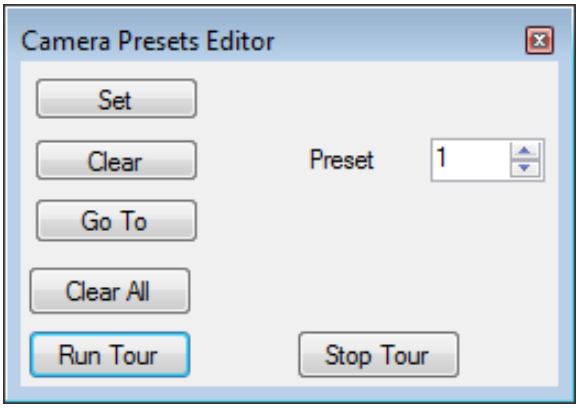
Perform the following tasks to create a new tour:

4.11.1 Displaying the Preset Editor

1. Select **Setup Modules** > **Tours Editor** from the Main Menu.

The **Tour Properties** dialog box opens.

Figure 4-47: Camera Preset Editor



4.11.2 Adding a Preset

1. Perform the Displaying the Preset Editor step (Section 4.11.1).
2. Select the relevant point of the tour from the **Preset** field.
3. Position the camera on the preset location, adjust the zoom and focus.
4. Click the **Set** button. Accuracii saves the PT position, zoom and focus under the selected preset number.

4.11.3 Deleting a Preset

1. Perform the Displaying the Preset Editor step (Section 4.11.1).
2. From the **Preset** field, select the preset you wish to remove from the tour.
3. Click the **Clear** button. Accuracii clear any positioning settings currently associated with the selected preset.

4.11.4 Go to a Preset

1. Perform the Displaying the Preset Editor step (Section 4.11.1).
2. Select the relevant point of the tour from the **Preset** field.
3. Click the **Go to** button. Accuracii moves the PT position to the selected preset, zoom and focus according to the predefined settings.

4.12 Virtual Serial Port Emulator

To connect the camera with an auxiliary application through Sensorii, one of the computer serial communication ports needs to emulate a TCP port. This section reviews the steps required to set one of the computer serial ports to emulate a virtual port.

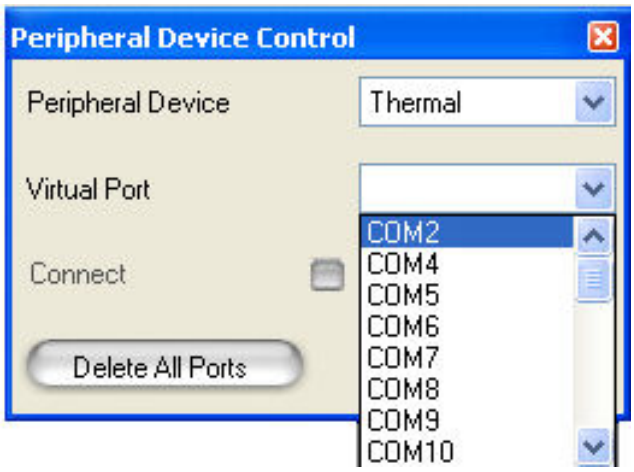
4.12.1 Sensorii Settings

1. Verify which of the computer serial port is available.
2. From Sensorii main menu, select **Setup Modules** > **Peripheral Device Control**.

The **Peripheral Device Control** window opens.

3. Select the type of device the application is connected to from the **Peripheral Device** option box.
4. Select the computer serial port used for emulation from the **Virtual Port** option box.
5. Click the **Connect** button.

Figure 4-48: Peripheral Device Control Window



4.12.2 Settings on the Auxiliary Application

On the communication setup of the auxiliary application:

1. Select the serial communication port defined as virtual port on Sensorii Settings (Section 4.12.1).

4.13 Service Taskbar

Certain features of Sensorii are accessed from the taskbar on the computer desktop. Click the Show Hidden Icons arrow in the lower right corner of the screen to reveal the Sensorii icon (see Figure 4-49).

The Sensorii icon color indicates the communication status of the camera:

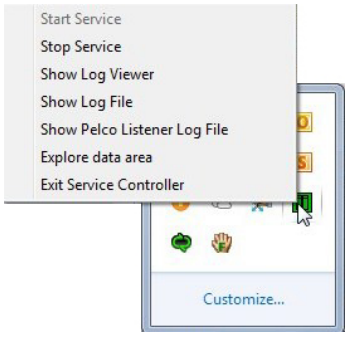
- **Gray** – indicates no active communication with any camera
- **Green** – indicates there is active communication with a camera

Figure 4-49: Sensorii Service Icon

Right click on the Sensorii icon to open the Service Controller floating menu which includes the following features (see Figure 4-50):

- **Start Service** – turns camera service ON
- **Stop Service** – turns camera service OFF
- **Show Log Viewer** – opens the Camera Service Monitor records log of the communication between Sensorii and the Camera System
- **Show Log File –** opens a text document of activity recorded in the Camera Service Monitor
- **Show Pelco Listener Log File –** opens a text document with records of the communication between Sensorii and the Pelco controller
- **Explore Data Area –** opens a directory of maps and camera setting files
- **Exit Service Conroller–** closes the Service Controller floating menu

Figure 4-50: Service Controller Floating Menu



TIP

*The **Show Log File** and the **Explore Data Area** features can be accessed before initializing Sensorii or choosing an active camera.*

4.14 Camera Service Monitor

The Camera Service Monitor is an active communication log containing the records of transmission between Sensorii and the Camera Systems.

To open the **Camera Service Monitor** window perform either of the following:

- Click the **Camera Service Monitor** icon on the Upper Toolbar (Section 2.3)
- Select **Camera Service Monitor** from the Service Taskbar floating menu (Section 4.13)

The following sections describe the menu choices in the main menu of the **Camera Service Monitor** window

4.14.1 Camera Selection

Select the relevant camera system from **Camera** option box to view service messages from that camera.

4.14.2 Resume/Suspend Button

Click to start or pause the message display.

4.14.3 Formatting

The Formatting menu provides the following options for viewing the service messages (see Figure 4-51):

- Filters
  - **Protocols** – when selected, shows information on the protocol layer.
  - **Communication** – when selected, shows more information in the communication layer.
  - Async. traffic – displays only traffic messages associated with a command sent from Sensorii.
  - Misc. – displays all other messages that are not part of the above definitions.

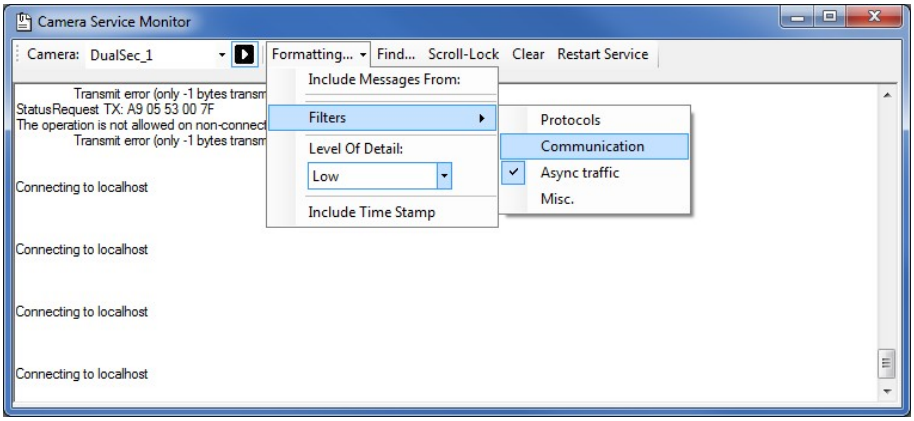
4.14.4 Level of Detail

- **High** – All messages displayed.
- **Low** – Only error messages are displayed.

4.14.5 Include Time Stamp

When selected, the message time is displayed with the message.

Figure 4-51: Camera Service Monitor Filters

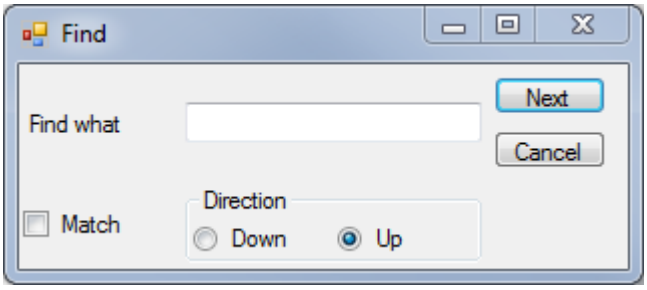


4.14.6 Find

To conduct a search of the service messages:

1. Select the **Find..** menu from the **Camera Service Monitor** main menu. The **Find** window opens (see Figure 4-52).
2. Enter the search word or phrase in the **Find what** text box.
3. Select the **Match** checkbox to conduct a case sensitive search.
4. Select in which direction to search the list, **Down** or **Up**.

Figure 4-52: Camera Service Monitor Find Window



4.14.7 Additional Menu Options

- Scroll-Lock – when selected, stops the display of messages; when cleared, all messages received during scroll-lock appear
- **Clear** – Removes all messages currently displayed in the window.
- **Restart Service** – restarts the message transmission.

4.15 Logging Off

To log off Sensorii:

Select **File**➔**Exit** from the Main Menu.

This chapter reviews Sensorii software installation procedure.

NOTE

Uninstall any Sensorii version currently installed before installing a new version.

5. Operator Procedures

This chapter describes operator procedures of the camera system through Sensorii and includes the following sections:

- Section 5.1: System Operation
- Section 5.2: Day/Night Mode Selection
- Section 5.3: Thermal Operation
- Section 5.4: Exposure and Focus Adjustment
- Section 5.5: Controlling the Camera – Manual
- Section 5.6: Controlling the Camera – Automatic Controls
- Section 5.7: Preset Tours
- Section 5.8: Fire Detection
- Section 5.9: Range Metering

5.1 System Operation

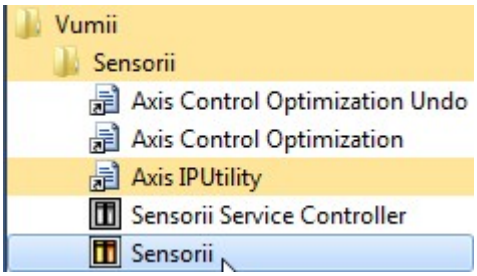
This chapter reviews the tasks associated with operating Sensorii during search and detection routines and includes the following sections:

5.1.1 Sensorii Startup

To open Sensorii on your desktop:

1. Click the Windows **Start** button.
2. Select **All Programs** ➔ **Vumii** ➔ **Sensorii** ➔ **Sensorii** (see Figure 3-8).

Figure 5-1: Vumii Menu in MS Windows Start Menu



Sensorii workspace appears (🗁 Chapter 2.4: Workspace).

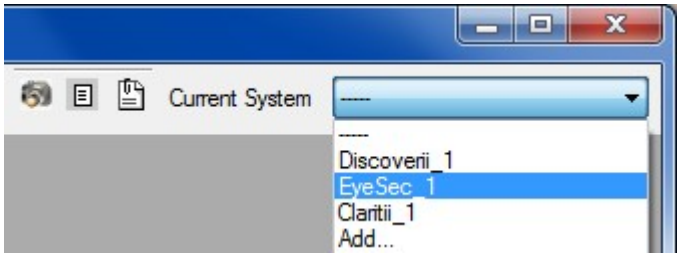
5.1.2 Predefined System Selection

NOTE

The system administrator sets up and maintains the parameters of the predefined systems (🗁Section 3.4: Defining a Camera System).

Select the relevant Camera System from the **Current System** option box.

Figure 5-2: Camera System Selection



When Sensorii establishes communication with the selected Camera System, the predefined workspace layout is displayed (see Figure 2-4).

NOTE

The system administrator predefines the default workspace layout (🗁Section 4.4: Layout Setup).

■

5.2 Day/Night Mode Selection

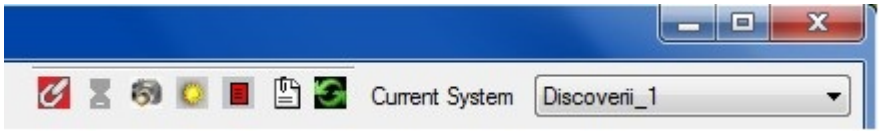
Day and night modes activate (see Figure 5-3)::

- Illumination devices such as IR LED or laser illumination
- Switch between day and night imagers

Click the **Day / Night** mode selection button to display one of the following options:

- Night – activates devices parameters associated with the **Night** mode.
- Day – activates devices and parameters associated with the **Day** mode.

Figure 5-3: Upper Toolbar



5.3 Thermal Operation

The **Thermal Operation** window controls the day to day use and maintenance of the thermal camera.

NOTE

Each camera system has different features (see Table 4-1). The Thermal window changes according to the active system. The window pictured in Figure 5-4 is from one particular system.

5.3.1 Accessing Thermal Controls

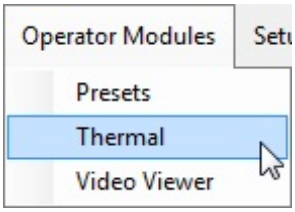
The **Thermal** window is displayed on the default screen of a system with a thermal camera.

Figure 5-4: Thermal Window

To open a separate **Thermal** window:

1. Select the relevant camera system from the **Current System** option box.
2. Select **Operation Modules** ➔**Thermal** from the Main Menu. The **Thermal** window opens.

Figure 5-5: Selecting Thermal Operation



To set parameters for a thermal camera, see section 4.2 Thermal Camera Configuration.

5.3.2 NUC (Non-uniformity Correction)Update

The **NUC Update** command initiates a non-uniformity correction procedure which enables the camera system to calibrate the uniformity of the detection array using a reference target. During NUC operation the camera view must be sited entirely on a distant, uniform scene, such as the sky.

NOTE

When using zoom lens and an object closer than 800 meters is in the line of vision of the camera, operation of the NUC may reduce image quality.

To initiate NUC operation:

1. Verify that the view of the camera is set to a distant, uniform scene such as the sky.
2. Verify that there are no objects in the line of vision of the camera within 800 meters.
3. Click the **NUC** button. The image on the screen is refreshed.

During the update, the video image either freezes or goes blank (see sections 4.2.2.6 - 4.2.2.5 for information on setting the features of the NUC update).

NOTE

NUC update is required only when the operator sees image degradation.

The NUC update does not resolve poor image quality caused by lens condensation or dirt on the lens.

5.3.3 Changing Polarity

To change the polarity:

1. Click the arrow next to the **Polarity** option box.
2. Select one of the following options:
   - **White hot** – hot spots are displayed in white.
   - **Black hot** – hot spots are displayed in black.

5.3.4 Digital Zoom

The **Digital Zoom** feature enlarges the digital image seen on the screen. It does not affect the resolution of the image.

To adjust the digital zoom:

1. Click the arrow next to the **Digital Zoom** option box.
2. Select the desired magnification.

5.3.5 Optical Zoom Control

Optical zoom adjusts the magnification of the camera's lens. It can be controlled in two ways.

To control the optical zoom by stages:

1. Click the arrow next to the **Zoom** option box.
2. Select the desired magnification.

To control the optical zoom gradually:

1. Check **Continuous Zoom** or **Show All** in the **View** option box. The **Continuous Zoom** slider control is displayed.
2. There are a few ways to adjust the zoom with the slider control:

- Click on the slider bar or drag the slider value box.
- Click the **Wide** or **Tele** button.
- Right click the slider control and type a value in the **Value** text box of the pop up window.

Figure 5-6: Thermal Operation Window with Show All Option Checked

5.3.6 Remote Power Control

The camera engine can be remotely switched on or off from the **Thermal Operation** window.

To switch the engine **ON** select the **Power** check box

To switch the engine **OFF** clear the **Power** check box.

5.3.7 Auto Focus

Auto focus automatically adjusts the camera to the best focal distance for the object located in the center of the FOV. When the zoom is changed, the camera updates the focal distance.

To activate the auto focus, click the **Auto Focus** button.

5.3.8 ROI Selection

There are three choices for the Region of Interest option. Select either the full view or select from two custom ranges which are defined in the **Thermal Configuration** window (Section4.2.2.15: ROI)

Select the relevant ROI from the **Active ROI** option box.

5.3.9 Focus Adjustment

To manually adjust the camera focus:

1. Check the **Focus** or **Show All** box in the **View** option box. The **Focus** slider control is displayed.

2. Use either of the following options to adjust the focus with the slider control:

- Click on the slider bar or drag the slider value box.
- Click the **(-)** or **(+)** symbol.
- Click one of the arrow buttons.
- Right click the slider control and type a value in the **Value** text box of the pop up window.

5.4 Exposure and Focus Adjustment

To adjust the video display of a CCD camera use either of the following methods:

- Section 5.4.1: Focus Adjustment
- Section 5.4.2: Exposure

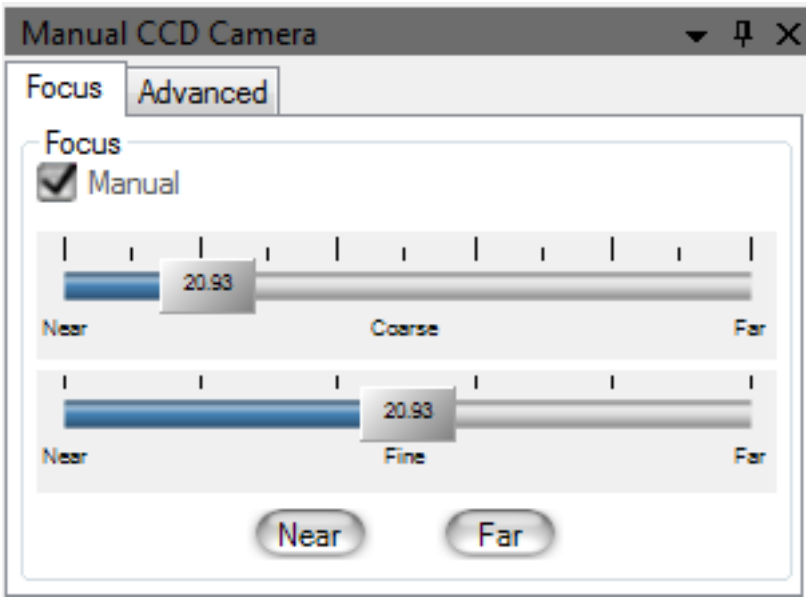
NOTE

*If the **Manual CCD Camera** window (see Figure 2-8) is not open, select **Operator Modules** > **Manual Camera**.*

5.4.1 Focus Adjustment

1. Select the **Focus** tab in the **Manual CCD Camera** window.
2. Adjust the **Coarse** focus scroll bar until the **Live Video** image comes into focus (🗁Section 2.5: Scroll Bar Adjustment).
3. Adjust the **Fine** focus scroll bar to fine-tune the focus. The **Fine** scroll bar remains in the center of the slider enabling fine adjustments around the current focus position.

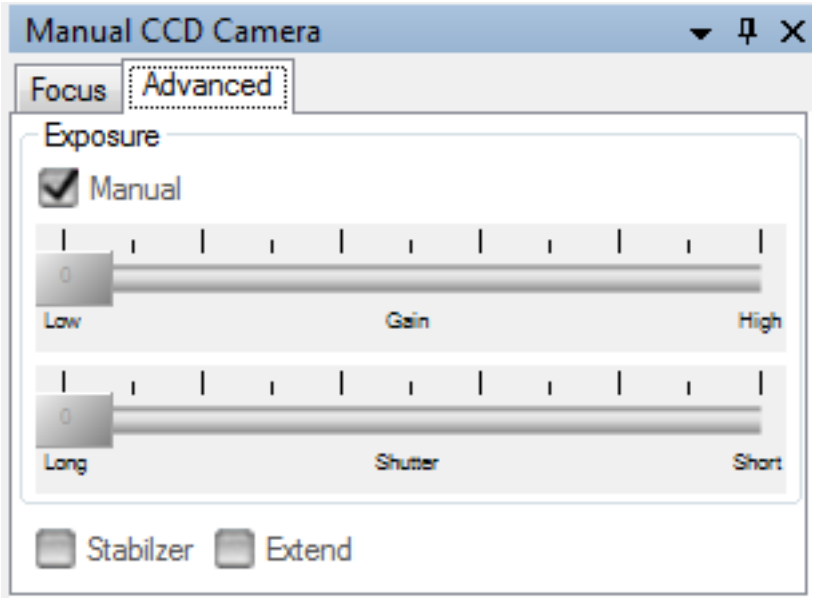
Figure 5-7: Focus Adjustment



5.4.2 Exposure Adjustment

1. Select the **Advanced** tab from the **Manual CCD Camera** window. The **Advanced** window appears (see Figure 5-8).
2. Adjust the **Gain** scroll bar to receive the optimal image quality in the **Live Video** window (🗁Section 2.5: Scroll Bar Adjustment).
3. Adjust the **Shutter** scroll bar to receive the optimal image quality in the **Live Video** window.

Figure 5-8: Exposure Adjustment



5.5 Controlling the Camera – Manual Controls

This section reviews the tasks associated with controlling the direction of the camera's position and view.

NOTE

*If the **PTZ** window (see Figure 5-9) is not open, select **Operator Modules** > **PTZ** from the Main Menu.*

5.5.1 Camera Pan Tilt and Zoom Control

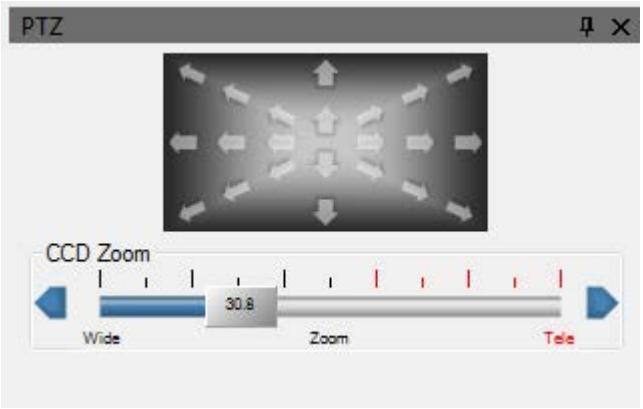
From the **PTZ** window use one of the following methods to control the direction of the pan and tilt of the PT unit and the speed of the PT unit movement (see Figure 5-9):

- Click the relevant location in the control area that represents the required direction (left-right and up-down) and the required speed (center is slower) of the PT unit. Click and hold the cursor in the control area to move continuously in the relevant direction and speed.
- Click and drag the mouse over the PT unit control area to maneuver the Camera System in the relevant direction and speed.

5.5.2 Zoom Control

Use one of the Scroll Bar Adjustment methods to adjust the CCD zoom scroll bar (See Figure 5-9).

Figure 5-9: PTZ Window



5.6 Controlling the Camera – Automatic Controls

This section reviews the options available to position the Camera System on a required object or location.

5.6.1 Changing FOV using Presets Window

NOTE

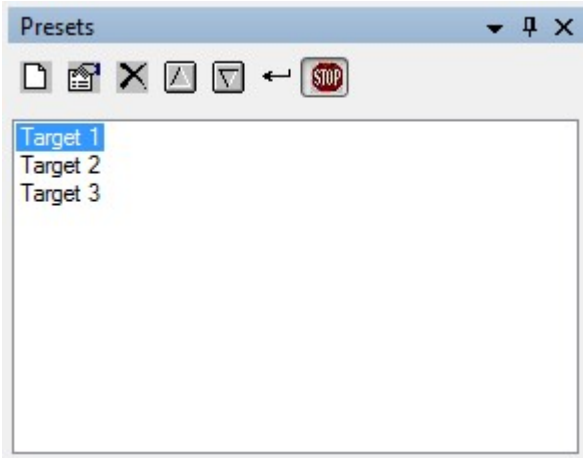
When the Presets window (see Figure 5-10) is not open, select ***Operator Modules*** *>* ***Presets*** *from the Main Menu.*

Use either of the following options:

- In the **Presets** window (see Figure 5-10), double click the relevant preset.
- Select the relevant preset and click the **Go To** button located on the **Presets** window toolbar.

The camera is positioned on the designated location.

Figure 5-10: Presets Window



5.6.2 Changing FOV using Live Video Window

Perform either of the following options:

- Click the relevant location in the Video window to place the selected object at the center of the camera FOV.
- Drag the mouse to define a rectangular area. The camera direction and zoom are adjusted to show the designated area in the camera FOV.

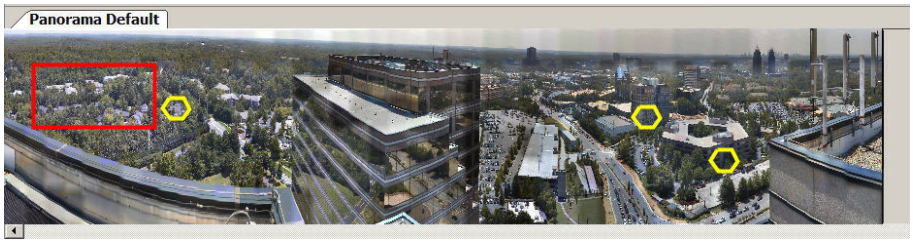
5.6.3 Changing FOV using Panorama Window

NOTE

*If the **Panorama** window (see Figure 5-11) is not open, select **Operator Modules** > **Panorama** from the Main Menu.*

Click the relevant location in the panorama view (see Figure 5-11). The camera is positioned on the selected preset.

Figure 5-11: Panorama Window



5.6.4 Changing FOV using Compass Window

NOTE

*If the **Compass** window (see Figure 5-12) is not open, select **Operator Modules** > **Compass** from the Main Menu.*

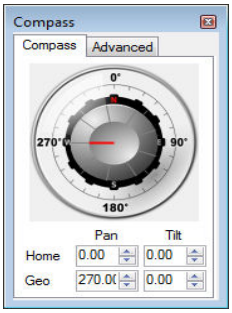
1. Verify that the **Compass** tab is selected (see Figure 5-12) .
2. Set the relevant values either relative (Home) or true (Geo) bearings using the following spin dials:

- **Pan** – contains the Camera System's azimuth.
- **Tilt** – contains the Camera System's elevation.

TIP

You can double-click the relevant bearing on the compass dial to position the Camera System on this relative bearing.

Figure 5-12: Compass Window



5.6.5 Changing FOV using GPS

NOTES:

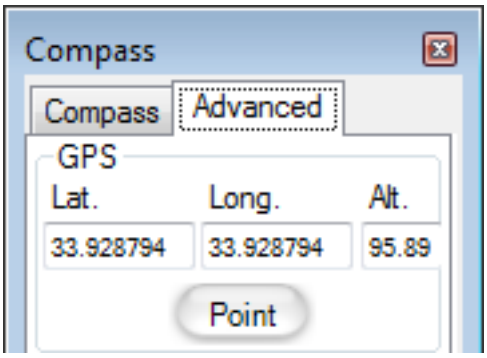
*If the **Compass** window (see Figure 5-13) is not open, select **Operator Modules** > **Compass** from the Main Menu.*

The GPS Setup procedure (🗁Section 4.6) must be completed before using this option.

To position the Discoverii™ on a Preset with known coordinates and altitude (see Figure 5-13):

1. Verify that the Advanced tab is selected.
2. Type the Preset latitude coordinates (in degrees and decimal fractions of a degree) in the Lat. text box.
3. Type the Preset longitude coordinates (in degrees and decimal fractions of a degree) in the Long. text box.
4. Type the Preset height (in meters) in the Alt. text box.
5. Click the **Point** button. The Discoverii™ is positioned on the defined location.

Figure 5-13: Compass Window – Advanced Tab



5.6.6 Changing FOV using Range and Size

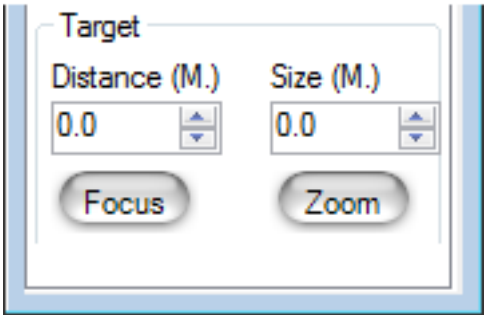
NOTE

*When the **Compass** window (see Figure 5-12) is not open, select **Operator Modules** > **Compass** from the Main Menu.*

To set the camera zoom and focus (see Figure 5-14):

1. Set the target's range (in meters) in the Distance text box.
2. Set the target's physical height (in meters) in the Size text box.
3. Click the **Focus** button. The camera adjusts focus according to the calculation of the distance parameter.
4. Click the **Zoom** button. The camera adjusts the zoom to display the target on the full screen according to the calculation of the target distance and the target size.0.

Figure 5-14: Compass Window – Advanced Tab



5.6.7 Changing FOV using Aerial Map

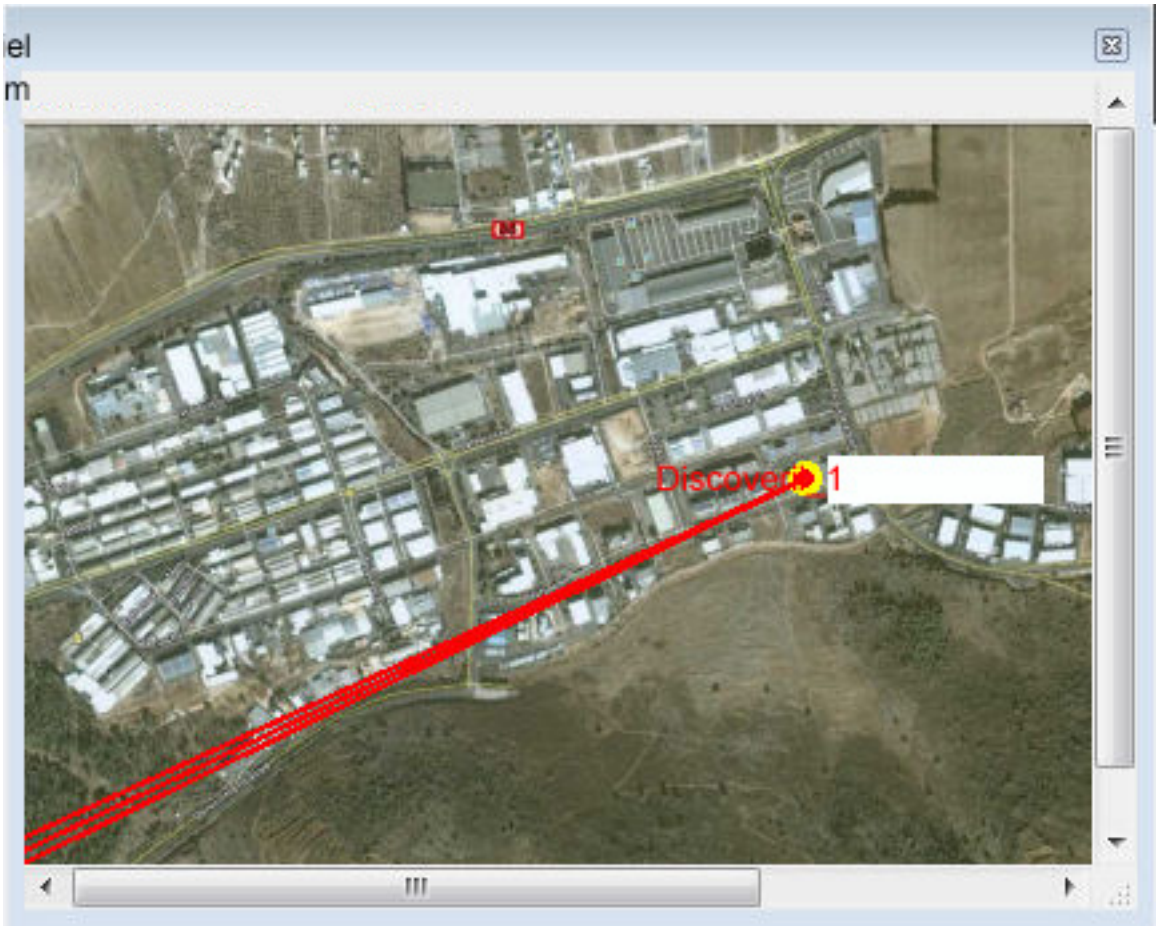
NOTES:

*If the **Aerial Map** window (see Figure 5-15) is not open, select **Operator Modules** > **Aerial Map** from the Main Menu.*

The Aerial Map Setup procedure (Section 4.5) must be completed before using this option.

1. Click the relevant area on the map. The Camera System is directed to the chosen location.
2. Adjust the camera tilt until the object is displayed.

Figure 5-15: Aerial Map Window



5.7 Preset Tours

NOTE

*If the **Tours** window (see Figure 5-11) is not open, select **Operator Modules** > **Presets** from the Main Menu.*

5.7.1 Running a Tour

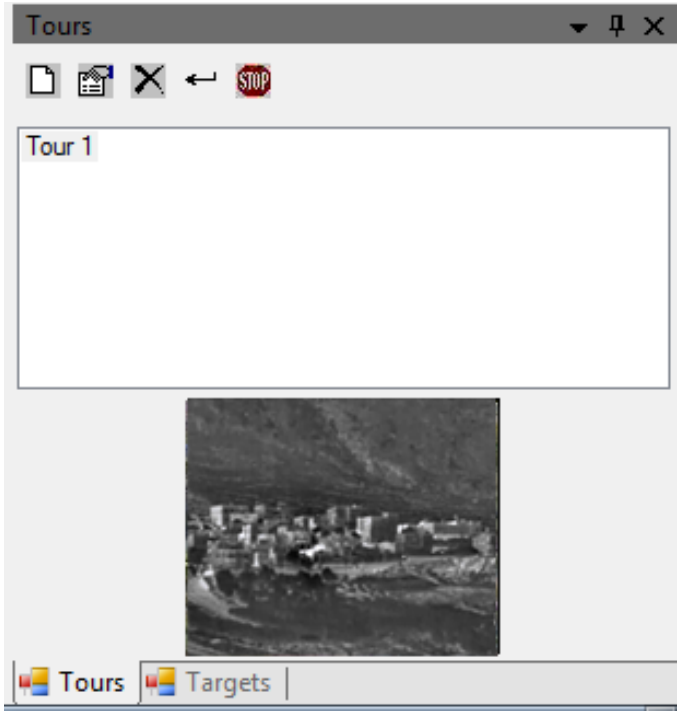
To run a predefined scanning program (Tour):

From the **Tours** window (see Figure 5-16) perform one of the following options to run a tour:

- Double click the required tour.
- Select the relevant tour from the list and click the **Run selected tour** button located on the **Tours** window toolbar.

The Camera System scans each selected preset sequentially, remains on target for a predefined period and then continues to the next preset. When the sequence has finished, the camera returns to the start position.

Figure 5-16: Tour Window



5.8 Fire Detection

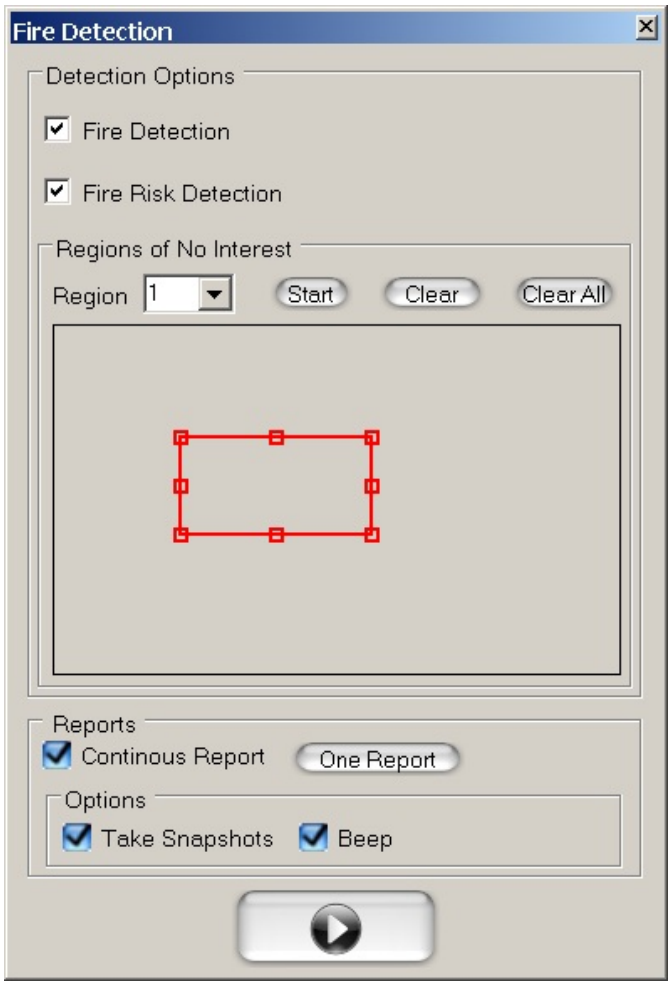
This section describes the tasks associated with configuring and operating the Fire Detection feature.

5.8.1 Activating Fire Detection

To activate fire detection:

1. Select **Operator Modules** > **Fire Detection** from the **Main Menu**. The **Fire Detection** window opens.
2. Select the **Fire Detection** check box to activate detection of fire flames followed by an alarm (see Figure 5-17).
3. Select the **Fire Risk Detection** checkbox to activate detection of hot spots with a subsequent alarm.
2. Click the **Play** button located on the bottom of the window.

Figure 5-17: Fire Detection Window – Play Button



5.8.2 Setting Region of Non Interest (RONI)

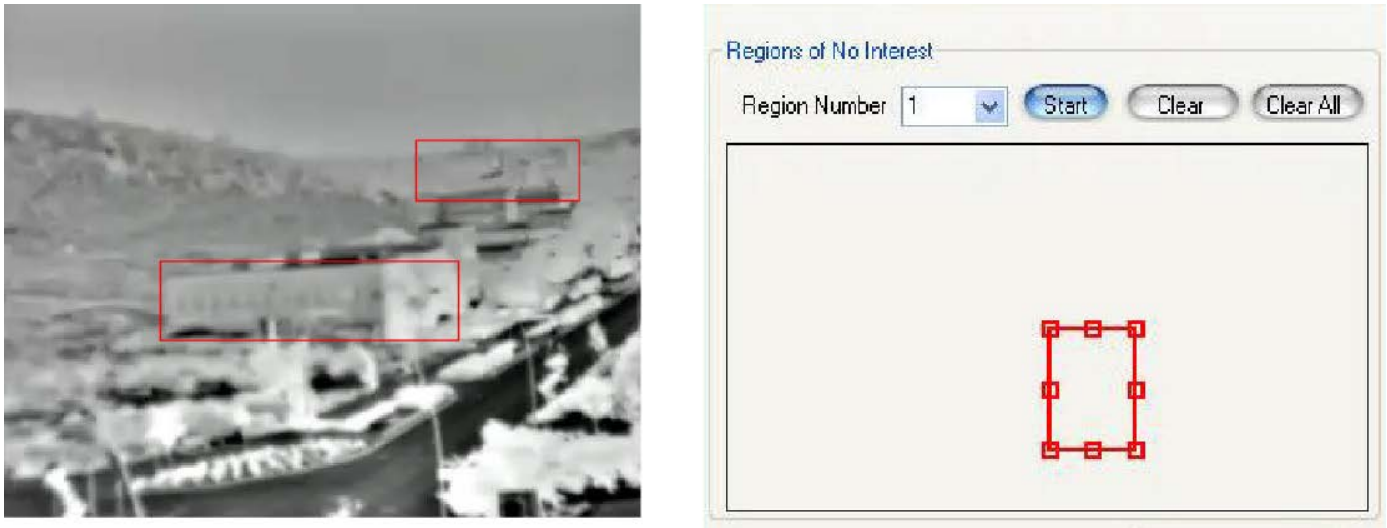
A region of non interest (RONI) is a rectangular area defined by the operator to mask an area that is a known hot spot; the operator defines a RONI to eliminate alerts of Fire Risk Assessment and Fire Detection in this area.

5.8.2.1 Defining a New RONI

To define a RONI:

4. Using manual (🗁Section 5.5: Controlling the Camera – Manual Controls) or automatic (5.6: Controlling the Camera – Automatic Controls) camera controls, position the camera on the area to be masked as a RONI.
5. Select a region number from the **Region Number** option box to assign it to the new RONI.
6. Click the **Start** button. A new RONI area appears in the live video window and in the **Fire Detection** window.
7. Drag the corners of the RONI to change its size or drag the entire RONI to the relevant location on the screen.

Figure 5-18: Fire Detection Window – RONI Settings



NOTES

The system will not display Fire Risk Assessment or Fire Detection alerts within an active RONI area.

A defined RONI stays active until it is deleted

8. Repeat steps 4 to 7 above to mask additional hot spot areas as RONI.

TIP

The system supports up to five different RONI areas.

5.8.2.2 Deleting Existing RONI

1. Select the relevant RONI number from the Region Number option box (see Figure 5-18).
2. Click the Clear button. The selected RONI is removed.

TIP

Click the ***Clear All*** *button to remove all defined RONI areas.*

5.8.3 Additional Settings

5.8.3.1 Reports

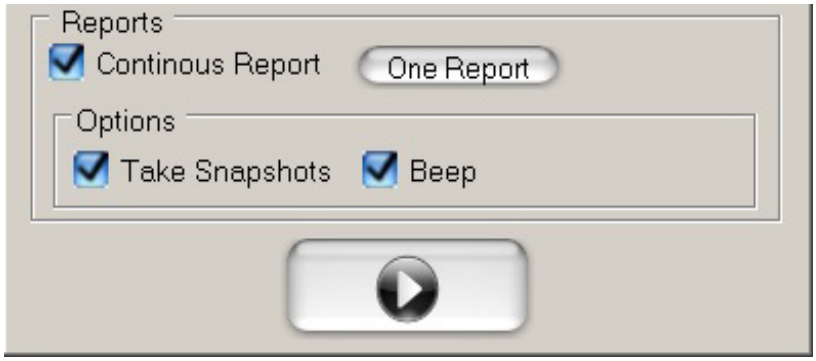
The following settings in the **Reports** section enable controlling fire detection reports provided in the status window.

- **Continuous** – when selected, Sensorii automatically provides periodic reports
- **One Report** button – click to initiate a report and to open the status window

5.8.3.2 Options

- **Take Snapshots** – when selected, Sensorii takes a snapshot of the camera view at the time a report is created. A link to the snapshot is provided with the report in the status window. The most recent 300 snapshots are saved.
- **Beep** – when checked, a beep is sounded every time a report is created
- **Play button** – activates fire detection

Figure 5-19: Fire Detection Window – Additional Settings

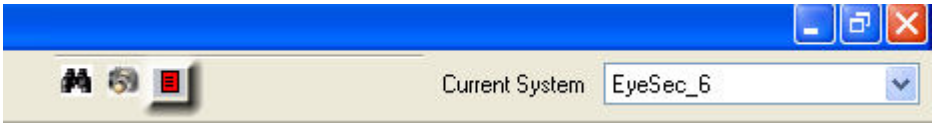


5.8.4 Alerts and Log Settings

The upper toolbar includes the **Log Messages** icon that indicates the following active events:

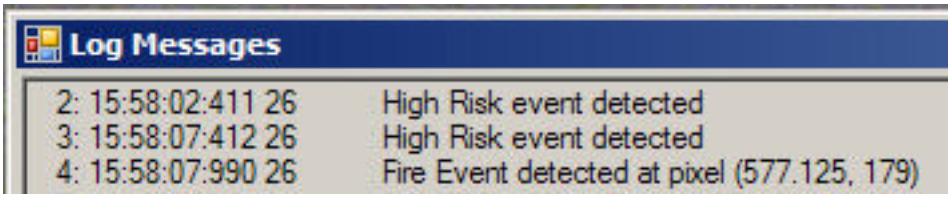
- **Fire risk detection** – when a hot spot defined as a Fire Risk is detected, the **Log Messages** icon changes to red.
- **Fire flames detection** – when fire flames are detected, the **Log Messages** icon changes to red and a sound alert is activated.

Figure 5-20: Fire Detection Log Messages Button



To display the messages log, click the **Log Messages** button located on the upper toolbar. The **Log Messages** window opens. The events are registered as records in the **Log Messages** window (see Figure 5-21).

Figure 5-21: Log Messages Window


Log Messages
2: 15:58:02:411 26 High Risk event detected
3: 15:58:07:412 26 High Risk event detected
4: 15:58:07:990 26 Fire Event detected at pixel (577.125, 179)

5.8.5 Detection of Fire and Hot Spots

NOTE

The camera must be focused to detect hot spots or fire flames.

Detection starts only when the camera is static. The camera communication protocol includes a Static/Moving command that is sent by the control application indicating the status of a PT unit or any other element that might cause a movement of the camera.

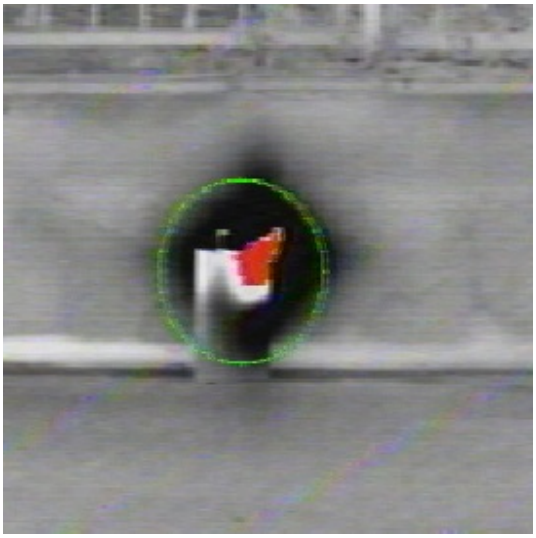
During camera scan, the system analyzes the image viewed and marks fire detection in the following manner:

- **Hot spots** – areas in which the temperature exceeds the Fire Risk Assessment threshold are marked in red.

Figure 5-22: Detection of Hot Spots

- **Fire flames** – detected fire is marked by a circle. When more than one fire center is detected, each fire center is marked with different color.

Figure 5-23: Detection of Fire Flames



NOTE

The system can track and alert for up to five fire centers. When more than five active fire centers are detected on the screen, the system continues alarm but it stops marking additional fire detections.

TIP

The system supports the option of transmitting the coordinates from the area where an event occurred.

NOTE

In order to ensure proper operation and optimum fire detection capabilities, the unit must be installed on a stable mounting pole as described in the User Manual.

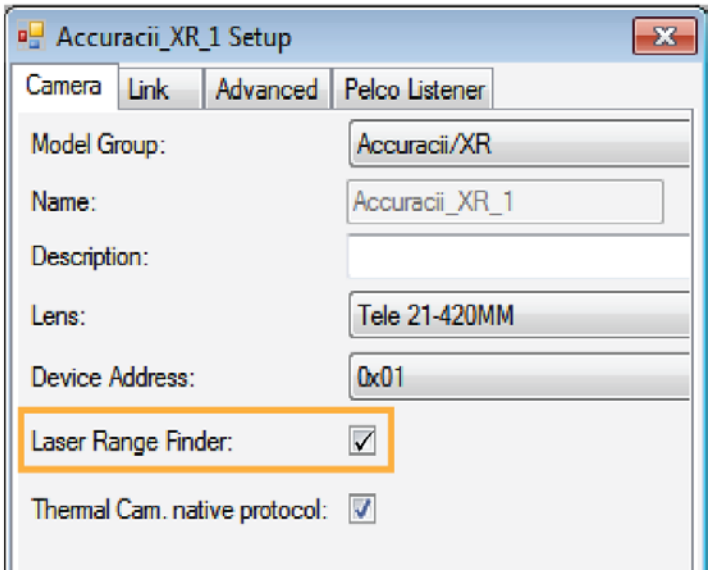
5.9 Range Metering

This section review the tasks associated with measuring target distance using a laser range finder (LRF).

5.9.1 LRF Configuration

To use the LRF options, the **Laser Range Finder** check box must be selected during the General Camera Settings (Section 3.4.3).

Figure 5-24: Laser Range Finder Check Box



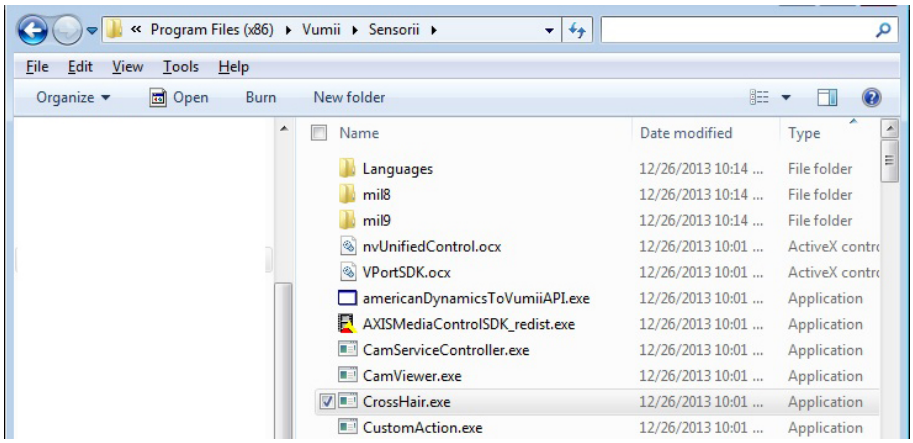
5.9.2 Opening LRF Utility

The Cross Hair utility helps positioning the LRF on a target.

To open the Cross Hair utility:

1. Open the Sensorii folder, usually located under **Program Files (x86)>Vumii.**
2. Double-click the **CrossHair.exe** file. A transparent window with a centered cross hair opens.

Figure 5-25: Opening the Cross Hair Utility


Program Files (x86) ▸ Vumii ▸ Sensorii ▸
File Edit View Tools Help
Organize Open Burn New folder
Name
Date modified
Type
Languages 12/26/2013 10:14 ... File folder
mil8 12/26/2013 10:14 ... File folder
mil9 12/26/2013 10:14 ... File folder
nvUnifiedControl.ocx 12/26/2013 10:01 ... ActiveX contr
VPortSDK.ocx 12/26/2013 10:01 ... ActiveX contr
americanDynamicsToVumiiAPI.exe 12/26/2013 10:01 ... Application
AXISMediaControlSDK_redist.exe 12/26/2013 10:01 ... Application
CamServiceController.exe 12/26/2013 10:01 ... Application
CamViewer.exe 12/26/2013 10:01 ... Application
CrossHair.exe 12/26/2013 10:01 ... Application
CustomAction.exe 12/26/2013 10:01 ... Application

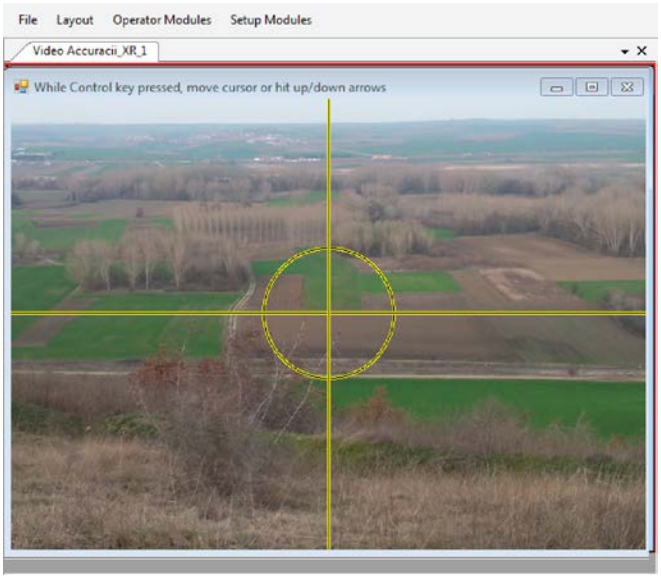
3. Drag the cross hair window on top of the video window (day camera video).

4. Adjust the size of the cross hair window to exactly cover the video window.

NOTE

The cross hair window and its window header must be fitted exactly to the size of the video image.

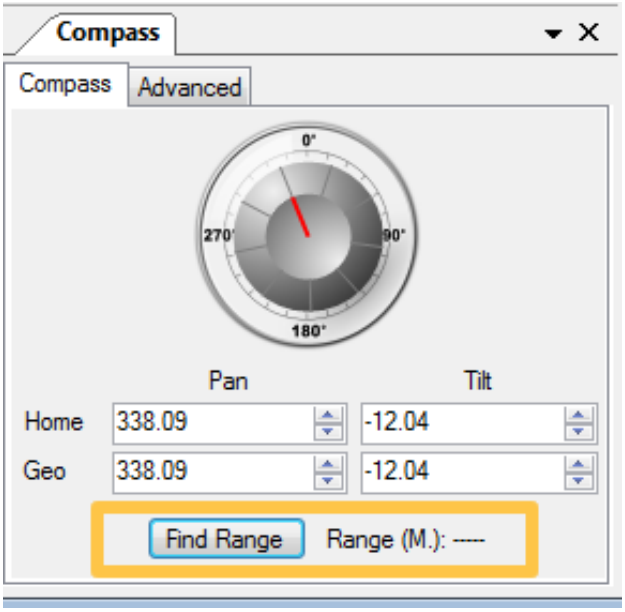
Figure 5-26: Cross Hair Overlays the Video Window



5.9.3 Lasing on a Target

1. Move the camera PT and place the cross hair on the target.
2. On the **Compass** window, click the **Find Range** button. The range result is displayed in meters.

Figure 5-27: Opening the Cross Hair Utility



NOTES

When lasing the sky or focusing off the target, the Laser Range Finder displays blank (_ _ _ _) reading.

The minimum duration between lasing is three seconds.

Bore sight between the LRF and the day camera is performed by the manufacture and is not calibrated by the user. The bore sight accuracy is 3 mrad.

6. Appendix A: Axis External Encoder Users

There are two applications that come with Sensorii which aid in and enhance the operation of an Axis external video encoder.

6.1 Axis IP Utility

Axis IP Utility discovers all Axis encoders on the local network and displays their IP addresses.

6.2 TCP Ping Tweak

TCP Ping Tweak boosts the communication performance between the control system and the camera.

7. Appendix B: Model Group Conversion Table

Vumii has updated its camera model group names. When defining a new camera system using the task manger (🗁Section 3.4.2: Adding a New Camera), use the following conversion table to select the proper model group according to your camera name:

Table 7-1: Model Group Conversion Table

Old camera name	*New camera name*	*Model Group Seelection*
CompactSec NG *CompactSec*	*Sii AT*	*Sii / AT*
EyeSec	*Sii ML*	*Sii / ML*
	Sii MLX	*Sii MLS*
EyeSec 25 - 225	*Sii XR Uncooled*	*Sii /XR*
RangeSec	*Sii XR Cooled*	*Sii / XR*

8. Appendix C: Default Communication Settings

Table 8-1 displays the system default communication settings.

Table 8-1: Default Communication Settings

Camera Model	*Default Baud Rate*	*Default Pelco-D Address*
Accuracii AT	9600	1
Accuracii ML	9600	1
Accuracii XR	9600	1
Claritii	9600	
Discoverii	9600	
Sii AT	2400	
Sii ML	2400	
Sii MLX	2400	
Sii XR Cooled	57600	
Sii XR Uncooled	2400	

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